

Experiment Number: 20614 - 02
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 06/07/2018
Time Report Requested: 14:46:31
First Dose M/F: 07/27/09 / NA
Lab: BAT

Custom Rpt (Litter-Based) -- 0-0, 0-20, 0-40, 0-80

NTP Study Number:	C20614B		
Lock Date:	01/10/2012		
Cage Range:	ALL		
Date Range:	ALL		
Reasons For Removal:	25021 TSAC	25020 NATD	25019 MSAC
Removal Date Range:	ALL		
Treatment Groups:	Include 001 0/0 ppm Include 007 0/80 ppm	Include 003 0/20 ppm	Include 005 0/40 ppm
Study Gender:	Male		
TDMSE Version:	2.5.0.0_sfh		
PWG Approval Date:	NONE		

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SUMMARY OF STATISTICALLY SIGNIFICANT ($P \leq .05$) RESULTS IN THE ANALYSIS OF PERFLUOROOCCTANOIC ACID

MALE RATS

Organ

Adrenal Cortex
Adrenal Medulla
Heart: Valve
Kidney
Liver

Liver: Bile Duct
Liver: Hepatocyte

Pancreas: Acinus
Prostate: Ventral
Skin
Spleen
Testes: Germinal Epithelium

Morphology

Degeneration Cystic
Hyperplasia
Degeneration
Infarct
Degeneration Cystic
Eosinophilic Focus
Inflammation Focal
Mixed Cell Focus
Necrosis
Pigment
Hyperplasia
Cytoplasmic Alteration
Hypertrophy
Single Cell Death
Hyperplasia
Inflammation Chronic
Inflammation
Pigment
Degeneration

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Adrenal Cortex Degeneration Cystic				
LESION RATES				
OVERALL (a)	5/50 (10%)	2/50 (4%)	4/50 (8%)	0/50 (0%)
LITTERS (b)	4/25 (16%)	2/25 (8%)	4/25 (16%)	0/25 (0%)
POLY-3 RATE (c)	5/43.13	2/47.90	4/42.02	0/41.66
POLY-3 PERCENT (g)	11.6%	4.2%	9.5%	0%
TERMINAL (d)	5/36 (14%)	0/42 (0%)	4/35 (11%)	0/37 (0%)
FIRST INCIDENCE	743 (T)	655	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.052N	P=0.176N	P=0.516N	P=0.033N*
POLY 1.5	P=0.049N*	P=0.187N	P=0.510N	P=0.033N*
POLY 6	P=0.053N	P=0.167N	P=0.521N	P=0.033N*
RAO-SCOTT	P=0.088N	P=0.248N	P=0.540N	P=0.077N
LITTER C-A/FISHERS	P=0.071N	P=0.334N	P=0.649	P=0.055N

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Adrenal Cortex Hypertrophy				
LESION RATES				
OVERALL (a)	18/50 (36%)	24/50 (48%)	15/50 (30%)	16/50 (32%)
LITTERS (b)	16/25 (64%)	16/25 (64%)	14/25 (56%)	13/25 (52%)
POLY-3 RATE (c)	18/43.13	24/47.66	15/43.04	16/43.13
POLY-3 PERCENT (g)	41.7%	50.4%	34.9%	37.1%
TERMINAL (d)	18/36 (50%)	22/42 (52%)	12/35 (34%)	14/37 (38%)
FIRST INCIDENCE	743 (T)	694	533	473
STATISTICAL TESTS				
POLY 3	P=0.214N	P=0.269	P=0.331N	P=0.412N
POLY 1.5	P=0.213N	P=0.234	P=0.334N	P=0.421N
POLY 6	P=0.202N	P=0.301	P=0.318N	P=0.390N
RAO-SCOTT	P=0.237N	P=0.286	P=0.341N	P=0.417N
LITTER C-A/FISHERS	P=0.195N	P=0.616	P=0.387N	P=0.284N

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Adrenal Cortex: Zona Fasciculata Hyperplasia				
LESION RATES				
OVERALL (a)	2/50 (4%)	5/50 (10%)	2/50 (4%)	1/50 (2%)
LITTERS (b)	2/25 (8%)	5/25 (20%)	2/25 (8%)	1/25 (4%)
POLY-3 RATE (c)	2/43.13	5/47.35	2/42.02	1/41.66
POLY-3 PERCENT (g)	4.6%	10.6%	4.8%	2.4%
TERMINAL (d)	2/36 (6%)	5/42 (12%)	2/35 (6%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.239N	P=0.256	P=0.685	P=0.512N
POLY 1.5	P=0.234N	P=0.246	P=0.688	P=0.509N
POLY 6	P=0.238N	P=0.263	P=0.683	P=0.511N
RAO-SCOTT	P=0.256N	P=0.274	P=0.671	P=0.506N
LITTER C-A/FISHERS	P=0.215N	P=0.209	P=0.695	P=0.500N

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Adrenal Medulla Hyperplasia				
LESION RATES				
OVERALL (a)	13/50 (26%)	5/50 (10%)	5/50 (10%)	2/50 (4%)
LITTERS (b)	12/25 (48%)	5/25 (20%)	5/25 (20%)	2/25 (8%)
POLY-3 RATE (c)	13/43.71	5/47.67	5/42.83	2/41.66
POLY-3 PERCENT (g)	29.7%	10.5%	11.7%	4.8%
TERMINAL (d)	11/36 (31%)	4/42 (10%)	3/35 (9%)	2/37 (5%)
FIRST INCIDENCE	624	655	533	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.003N**	P=0.018N*	P=0.033N*	P=0.002N**
POLY 1.5	P=0.002N**	P=0.021N*	P=0.032N*	P=0.002N**
POLY 6	P=0.003N**	P=0.017N*	P=0.034N*	P=0.002N**
RAO-SCOTT	P=0.005N**	P=0.030N*	P=0.047N*	P=0.006N**
LITTER C-A/FISHERS	P=0.002N**	P=0.036N*	P=0.036N*	P=0.002N**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Blood Vessel Inflammation				
LESION RATES				
OVERALL (a)	5/50 (10%)	2/50 (4%)	2/50 (4%)	1/50 (2%)
LITTERS (b)	5/25 (20%)	2/25 (8%)	2/25 (8%)	1/25 (4%)
POLY-3 RATE (c)	5/43.13	2/47.35	2/42.24	1/41.66
POLY-3 PERCENT (g)	11.6%	4.2%	4.7%	2.4%
TERMINAL (d)	5/36 (14%)	2/42 (5%)	1/35 (3%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	743 (T)	683	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.090N	P=0.180N	P=0.224N	P=0.109N
POLY 1.5	P=0.087N	P=0.189N	P=0.221N	P=0.107N
POLY 6	P=0.091N	P=0.174N	P=0.224N	P=0.108N
RAO-SCOTT	P=0.103N	P=0.204N	P=0.241N	P=0.128N
LITTER C-A/FISHERS	P=0.071N	P=0.209N	P=0.209N	P=0.095N

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Blood Vessel Inflammation Chronic				
LESION RATES				
OVERALL (a)	4/50 (8%)	5/50 (10%)	4/50 (8%)	2/50 (4%)
LITTERS (b)	4/25 (16%)	5/25 (20%)	4/25 (16%)	2/25 (8%)
POLY-3 RATE (c)	4/43.69	5/47.67	4/42.19	2/41.66
POLY-3 PERCENT (g)	9.2%	10.5%	9.5%	4.8%
TERMINAL (d)	2/36 (6%)	4/42 (10%)	3/35 (9%)	2/37 (5%)
FIRST INCIDENCE	655	655	697	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.257N	P=0.554	P=0.624	P=0.359N
POLY 1.5	P=0.247N	P=0.541	P=0.632	P=0.353N
POLY 6	P=0.263N	P=0.561	P=0.617	P=0.362N
RAO-SCOTT	P=0.256N	P=0.550	P=0.611	P=0.351N
LITTER C-A/FISHERS	P=0.210N	P=0.500	P=0.649	P=0.334N

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TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Blood Vessel				
Mineral				
LESION RATES				
OVERALL (a)	1/50 (2%)	2/50 (4%)	4/50 (8%)	4/50 (8%)
LITTERS (b)	1/25 (4%)	2/25 (8%)	4/25 (16%)	4/25 (16%)
POLY-3 RATE (c)	1/43.44	2/47.35	4/43.39	4/41.82
POLY-3 PERCENT (g)	2.3%	4.2%	9.2%	9.6%
TERMINAL (d)	0/36 (0%)	2/42 (5%)	1/35 (3%)	3/37 (8%)
FIRST INCIDENCE	655	743 (T)	533	701
STATISTICAL TESTS				
POLY 3	P=0.095	P=0.530	P=0.178	P=0.167
POLY 1.5	P=0.099	P=0.523	P=0.178	P=0.170
POLY 6	P=0.094	P=0.534	P=0.179	P=0.167
RAO-SCOTT	P=0.112	P=0.543	P=0.201	P=0.188
LITTER C-A/FISHERS	P=0.107	P=0.500	P=0.174	P=0.174

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Blood Vessel: Pulmonary Artery				
Mineral				
LESION RATES				
OVERALL (a)	0/50 (0%)	2/50 (4%)	1/50 (2%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	2/25 (8%)	1/25 (4%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	2/47.59	1/42.02	0/41.66
POLY-3 PERCENT (g)	0%	4.2%	2.4%	0%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	---	679	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.469N	P=0.260	P=0.495	(e)
POLY 1.5	P=0.467N	P=0.254	P=0.497	(e)
POLY 6	P=0.468N	P=0.265	P=0.493	(e)
RAO-SCOTT	P=0.509N	P=0.359	P=0.570	(e)
LITTER C-A/FISHERS	P=0.461N	P=0.245	P=0.500	(e)

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Bone Marrow Hyperplasia				
LESION RATES				
OVERALL (a)	4/50 (8%)	9/50 (18%)	4/50 (8%)	5/50 (10%)
LITTERS (b)	4/25 (16%)	8/25 (32%)	4/25 (16%)	5/25 (20%)
POLY-3 RATE (c)	4/44.51	9/49.30	4/44.64	5/45.23
POLY-3 PERCENT (g)	9%	18.3%	9%	11.1%
TERMINAL (d)	1/36 (3%)	4/42 (10%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	302	116	134	108
STATISTICAL TESTS				
POLY 3	P=0.469N	P=0.160	P=0.642N	P=0.510
POLY 1.5	P=0.467N	P=0.148	P=0.641N	P=0.509
POLY 6	P=0.468N	P=0.170	P=0.642N	P=0.514
RAO-SCOTT	P=0.486N	P=0.179	P=0.636N	P=0.512
LITTER C-A/FISHERS	P=0.517N	P=0.160	P=0.649	P=0.500

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Brain				
Necrosis				
<hr/>				
LESION RATES				
OVERALL (a)	2/50 (4%)	0/50 (0%)	2/50 (4%)	3/50 (6%)
LITTERS (b)	2/25 (8%)	0/25 (0%)	2/25 (8%)	3/25 (12%)
POLY-3 RATE (c)	2/43.50	0/47.35	2/43.96	3/44.63
POLY-3 PERCENT (g)	4.6%	0%	4.6%	6.7%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	689	---	218	108
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.228	P=0.219N	P=0.690N	P=0.512
POLY 1.5	P=0.233	P=0.223N	P=0.688N	P=0.513
POLY 6	P=0.225	P=0.217N	P=0.694	P=0.511
RAO-SCOTT	P=0.264	P=0.263N	P=0.686N	P=0.523
LITTER C-A/FISHERS	P=0.233	P=0.245N	P=0.695	P=0.500

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
<hr/>				
Eye: Cornea Inflammation				
<hr/>				
LESION RATES				
OVERALL (a)	0/50 (0%)	3/50 (6%)	1/50 (2%)	1/50 (2%)
LITTERS (b)	0/25 (0%)	3/25 (12%)	1/25 (4%)	1/25 (4%)
POLY-3 RATE (c)	0/43.13	3/47.58	1/42.24	1/41.82
POLY-3 PERCENT (g)	0%	6.3%	2.4%	2.4%
TERMINAL (d)	0/36 (0%)	2/42 (5%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	---	680	683	701
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.578	P=0.138	P=0.496	P=0.494
POLY 1.5	P=0.580	P=0.132	P=0.497	P=0.495
POLY 6	P=0.581	P=0.142	P=0.495	P=0.495
RAO-SCOTT	P=0.570	P=0.192	P=0.534	P=0.530
LITTER C-A/FISHERS	P=0.592	P=0.117	P=0.500	P=0.500

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TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Eye: Retina Degeneration				
LESION RATES				
OVERALL (a)	3/50 (6%)	3/50 (6%)	2/50 (4%)	5/50 (10%)
LITTERS (b)	3/25 (12%)	3/25 (12%)	2/25 (8%)	5/25 (20%)
POLY-3 RATE (c)	3/43.71	3/47.35	2/42.02	5/41.66
POLY-3 PERCENT (g)	6.9%	6.3%	4.8%	12%
TERMINAL (d)	1/36 (3%)	3/42 (7%)	2/35 (6%)	5/37 (14%)
FIRST INCIDENCE	624	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.230	P=0.625N	P=0.518N	P=0.330
POLY 1.5	P=0.240	P=0.633N	P=0.511N	P=0.338
POLY 6	P=0.226	P=0.621N	P=0.525N	P=0.326
RAO-SCOTT	P=0.228	P=0.619N	P=0.505N	P=0.325
LITTER C-A/FISHERS	P=0.257	P=0.666	P=0.500N	P=0.351

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TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Harderian Gland Hyperplasia				
LESION RATES				
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/49 (2%)
LITTERS (b)	2/25 (8%)	0/25 (0%)	0/25 (0%)	1/25 (4%)
POLY-3 RATE (c)	2/43.13	0/47.35	0/42.02	1/40.66
POLY-3 PERCENT (g)	4.6%	0%	0%	2.5%
TERMINAL (d)	2/36 (6%)	0/42 (0%)	0/35 (0%)	1/36 (3%)
FIRST INCIDENCE	743 (T)	---	---	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.484N	P=0.217N	P=0.243N	P=0.521N
POLY 1.5	P=0.479N	P=0.222N	P=0.241N	P=0.518N
POLY 6	P=0.488N	P=0.213N	P=0.244N	P=0.520N
RAO-SCOTT	P=0.519N	P=0.331N	P=0.340N	P=0.567N
LITTER C-A/FISHERS	P=0.461N	P=0.245N	P=0.245N	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Heart				
Cardiomyopathy				
LESION RATES				
OVERALL (a)	29/50 (58%)	32/50 (64%)	28/50 (56%)	25/50 (50%)
LITTERS (b)	22/25 (88%)	20/25 (80%)	21/25 (84%)	18/25 (72%)
POLY-3 RATE (c)	29/46.36	32/48.60	28/45.91	25/43.14
POLY-3 PERCENT (g)	62.6%	65.8%	61%	58%
TERMINAL (d)	23/36 (64%)	27/42 (64%)	21/35 (60%)	21/37 (57%)
FIRST INCIDENCE	137	655	241	432
STATISTICAL TESTS				
POLY 3	P=0.305N	P=0.452	P=0.524N	P=0.409N
POLY 1.5	P=0.270N	P=0.407	P=0.532N	P=0.384N
POLY 6	P=0.316N	P=0.493	P=0.512N	P=0.412N
RAO-SCOTT	P=0.313N	P=0.460	P=0.525N	P=0.415N
LITTER C-A/FISHERS	P=0.122N	P=0.351N	P=0.500N	P=0.145N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Heart Mineral				
LESION RATES				
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	0/25 (0%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	0/47.35	2/43.62	0/41.66
POLY-3 PERCENT (g)	0%	0%	4.6%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	---	---	218	---
STATISTICAL TESTS				
POLY 3	P=0.560	(e)	P=0.240	(e)
POLY 1.5	P=0.568	(e)	P=0.240	(e)
POLY 6	P=0.559	(e)	P=0.240	(e)
RAO-SCOTT	P=0.623	(e)	P=0.390	(e)
LITTER C-A/FISHERS	P=0.595	(e)	P=0.245	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Heart: Valve Degeneration				
LESION RATES				
OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	3/50 (6%)
LITTERS (b)	0/25 (0%)	1/25 (4%)	0/25 (0%)	3/25 (12%)
POLY-3 RATE (c)	0/43.13	1/47.35	0/42.02	3/41.66
POLY-3 PERCENT (g)	0%	2.1%	0%	7.2%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	0/35 (0%)	3/37 (8%)
FIRST INCIDENCE	---	743 (T)	---	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.039*	P=0.519	(e)	P=0.112
POLY 1.5	P=0.040*	P=0.514	(e)	P=0.114
POLY 6	P=0.039*	P=0.522	(e)	P=0.113
RAO-SCOTT	P=0.081	P=0.624	(e)	P=0.193
LITTER C-A/FISHERS	P=0.042*	P=0.500	(e)	P=0.117

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Intestine Large, Colon Parasite Metazoan				
LESION RATES				
OVERALL (a)	7/49 (14%)	10/50 (20%)	12/50 (24%)	9/50 (18%)
LITTERS (b)	7/25 (28%)	9/25 (36%)	10/25 (40%)	9/25 (36%)
POLY-3 RATE (c)	7/42.22	10/47.47	12/44.24	9/42.52
POLY-3 PERCENT (g)	16.6%	21.1%	27.1%	21.2%
TERMINAL (d)	7/36 (19%)	9/42 (21%)	9/35 (26%)	7/37 (19%)
FIRST INCIDENCE	743 (T)	711	241	456
STATISTICAL TESTS				
POLY 3	P=0.348	P=0.394	P=0.177	P=0.397
POLY 1.5	P=0.357	P=0.372	P=0.175	P=0.398
POLY 6	P=0.352	P=0.409	P=0.180	P=0.405
RAO-SCOTT	P=0.348	P=0.392	P=0.180	P=0.390
LITTER C-A/FISHERS	P=0.348	P=0.381	P=0.276	P=0.381

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Islets, Pancreatic Hyperplasia				
LESION RATES				
OVERALL (a)	3/50 (6%)	6/50 (12%)	6/50 (12%)	3/50 (6%)
LITTERS (b)	3/25 (12%)	6/25 (24%)	6/25 (24%)	3/25 (12%)
POLY-3 RATE (c)	3/43.13	6/47.35	6/42.05	3/41.66
POLY-3 PERCENT (g)	7%	12.7%	14.3%	7.2%
TERMINAL (d)	3/36 (8%)	6/42 (14%)	5/35 (14%)	3/37 (8%)
FIRST INCIDENCE	743 (T)	743 (T)	736	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.512N	P=0.290	P=0.228	P=0.647
POLY 1.5	P=0.501N	P=0.278	P=0.233	P=0.650
POLY 6	P=0.513N	P=0.299	P=0.225	P=0.649
RAO-SCOTT	P=0.505N	P=0.290	P=0.226	P=0.628
LITTER C-A/FISHERS	P=0.465N	P=0.232	P=0.232	P=0.666

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney				
Accumulation, Hyaline Droplet				
LESION RATES				
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	2/25 (8%)	0/25 (0%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	2/47.63	0/42.02	0/41.66
POLY-3 PERCENT (g)	0%	4.2%	0%	0%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	---	666	---	---
STATISTICAL TESTS				
POLY 3	P=0.400N	P=0.260	(e)	(e)
POLY 1.5	P=0.401N	P=0.254	(e)	(e)
POLY 6	P=0.398N	P=0.265	(e)	(e)
RAO-SCOTT	P=0.491N	P=0.407	(e)	(e)
LITTER C-A/FISHERS	P=0.405N	P=0.245	(e)	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney Infarct				
LESION RATES				
OVERALL (a)	1/50 (2%)	5/50 (10%)	3/50 (6%)	7/50 (14%)
LITTERS (b)	1/25 (4%)	4/25 (16%)	3/25 (12%)	7/25 (28%)
POLY-3 RATE (c)	1/43.13	5/47.35	3/42.09	7/41.66
POLY-3 PERCENT (g)	2.3%	10.6%	7.1%	16.8%
TERMINAL (d)	1/36 (3%)	5/42 (12%)	2/35 (6%)	7/37 (19%)
FIRST INCIDENCE	743 (T)	743 (T)	725	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.030*	P=0.125	P=0.296	P=0.026*
POLY 1.5	P=0.032*	P=0.119	P=0.300	P=0.027*
POLY 6	P=0.030*	P=0.129	P=0.294	P=0.026*
RAO-SCOTT	P=0.044*	P=0.161	P=0.324	P=0.045*
LITTER C-A/FISHERS	P=0.021*	P=0.174	P=0.305	P=0.024*

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney Mineral				
LESION RATES				
OVERALL (a)	1/50 (2%)	0/50 (0%)	3/50 (6%)	0/50 (0%)
LITTERS (b)	1/25 (4%)	0/25 (0%)	3/25 (12%)	0/25 (0%)
POLY-3 RATE (c)	1/43.44	0/47.35	3/43.41	0/41.66
POLY-3 PERCENT (g)	2.3%	0%	6.9%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	655	---	314	---
STATISTICAL TESTS				
POLY 3	P=0.537N	P=0.483N	P=0.305	P=0.508N
POLY 1.5	P=0.528N	P=0.487N	P=0.306	P=0.506N
POLY 6	P=0.540N	P=0.481N	P=0.304	P=0.509N
RAO-SCOTT	P=0.541N	P=0.590N	P=0.377	P=0.585N
LITTER C-A/FISHERS	P=0.500N	P=0.500N	P=0.305	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney				
Nephropathy Chronic Progressive				
LESION RATES				
OVERALL (a)	48/50 (96%)	49/50 (98%)	47/50 (94%)	47/50 (94%)
LITTERS (b)	25/25 (100%)	25/25 (100%)	25/25 (100%)	25/25 (100%)
POLY-3 RATE (c)	48/48.07	49/50.00	47/48.03	47/48.40
POLY-3 PERCENT (g)	99.9%	98%	97.9%	97.1%
TERMINAL (d)	36/36 (100%)	41/42 (98%)	35/35 (100%)	36/37 (97%)
FIRST INCIDENCE	194	116	134	108
STATISTICAL TESTS				
POLY 3	P=0.262N	P=0.538N	P=0.522N	P=0.377N
POLY 1.5	P=0.203N	P=0.636N	P=0.422N	P=0.326N
POLY 6	P=0.354N	P=0.510N	P=0.800N	P=0.469N
RAO-SCOTT	P=0.301N	P=0.561N	P=0.533N	P=0.414N
LITTER C-A/FISHERS	(e)	P=1.000	P=1.000	P=1.000

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney: Cortex Cyst				
LESION RATES				
OVERALL (a)	1/50 (2%)	1/50 (2%)	2/50 (4%)	1/50 (2%)
LITTERS (b)	1/25 (4%)	1/25 (4%)	2/25 (8%)	1/25 (4%)
POLY-3 RATE (c)	1/43.13	1/47.35	2/42.02	1/41.66
POLY-3 PERCENT (g)	2.3%	2.1%	4.8%	2.4%
TERMINAL (d)	1/36 (3%)	1/42 (2%)	2/35 (6%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.560	P=0.739N	P=0.491	P=0.753
POLY 1.5	P=0.567	P=0.745N	P=0.494	P=0.755
POLY 6	P=0.559	P=0.735N	P=0.489	P=0.754
RAO-SCOTT	P=0.560	P=0.737N	P=0.490	P=0.736
LITTER C-A/FISHERS	P=0.592	P=0.755	P=0.500	P=0.755

Experiment Number: 20614 - 02
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Perfluorooctanoic Acid
 CAS Number: 335-67-1

Date Report Requested: 06/07/2018
 Time Report Requested: 14:46:31
 First Dose M/F: 07/27/09 / NA
 Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Kidney: Papilla, Urothelium Hyperplasia				
LESION RATES				
OVERALL (a)	2/50 (4%)	3/50 (6%)	1/50 (2%)	0/50 (0%)
LITTERS (b)	2/25 (8%)	3/25 (12%)	1/25 (4%)	0/25 (0%)
POLY-3 RATE (c)	2/43.13	3/47.67	1/42.02	0/41.66
POLY-3 PERCENT (g)	4.6%	6.3%	2.4%	0%
TERMINAL (d)	2/36 (6%)	2/42 (5%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	743 (T)	655	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.112N	P=0.545	P=0.509N	P=0.245N
POLY 1.5	P=0.110N	P=0.533	P=0.506N	P=0.243N
POLY 6	P=0.112N	P=0.555	P=0.511N	P=0.244N
RAO-SCOTT	P=0.147N	P=0.567	P=0.528N	P=0.291N
LITTER C-A/FISHERS	P=0.100N	P=0.500	P=0.500N	P=0.245N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Basophilic Focus				
LESION RATES				
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	2/50 (4%)
LITTERS (b)	1/25 (4%)	0/25 (0%)	2/25 (8%)	2/25 (8%)
POLY-3 RATE (c)	1/43.13	0/47.35	2/43.01	2/41.66
POLY-3 PERCENT (g)	2.3%	0%	4.7%	4.8%
TERMINAL (d)	1/36 (3%)	0/42 (0%)	0/35 (0%)	2/37 (5%)
FIRST INCIDENCE	743 (T)	---	241	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.219	P=0.481N	P=0.499	P=0.488
POLY 1.5	P=0.226	P=0.486N	P=0.501	P=0.491
POLY 6	P=0.217	P=0.478N	P=0.498	P=0.489
RAO-SCOTT	P=0.261	P=0.546N	P=0.525	P=0.511
LITTER C-A/FISHERS	P=0.243	P=0.500N	P=0.500	P=0.500

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Clear Cell Focus				
LESION RATES				
OVERALL (a)	35/50 (70%)	37/50 (74%)	33/50 (66%)	31/50 (62%)
LITTERS (b)	22/25 (88%)	24/25 (96%)	22/25 (88%)	20/25 (80%)
POLY-3 RATE (c)	35/44.33	37/47.47	33/42.05	31/42.11
POLY-3 PERCENT (g)	79%	77.9%	78.5%	73.6%
TERMINAL (d)	32/36 (89%)	36/42 (86%)	32/35 (91%)	30/37 (81%)
FIRST INCIDENCE	302	711	736	609
STATISTICAL TESTS				
POLY 3	P=0.310N	P=0.556N	P=0.589N	P=0.365N
POLY 1.5	P=0.261N	P=0.584	P=0.522N	P=0.339N
POLY 6	P=0.311N	P=0.516N	P=0.590	P=0.350N
RAO-SCOTT	P=0.328N	P=0.555N	P=0.577N	P=0.379N
LITTER C-A/FISHERS	P=0.149N	P=0.305	P=0.666	P=0.351N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
<hr/>				
Liver Degeneration Cystic				
<hr/>				
LESION RATES				
OVERALL (a)	2/50 (4%)	5/50 (10%)	7/50 (14%)	8/50 (16%)
LITTERS (b)	2/25 (8%)	5/25 (20%)	6/25 (24%)	8/25 (32%)
POLY-3 RATE (c)	2/43.13	5/47.63	7/42.02	8/41.72
POLY-3 PERCENT (g)	4.6%	10.5%	16.7%	19.2%
TERMINAL (d)	2/36 (6%)	4/42 (10%)	7/35 (20%)	7/37 (19%)
FIRST INCIDENCE	743 (T)	666	743 (T)	726
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.027*	P=0.259	P=0.072	P=0.039*
POLY 1.5	P=0.030*	P=0.247	P=0.074	P=0.040*
POLY 6	P=0.027*	P=0.268	P=0.069	P=0.039*
RAO-SCOTT	P=0.038*	P=0.282	P=0.091	P=0.055
LITTER C-A/FISHERS	P=0.031*	P=0.209	P=0.123	P=0.037*

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Eosinophilic Focus				
LESION RATES				
OVERALL (a)	3/50 (6%)	6/50 (12%)	5/50 (10%)	9/50 (18%)
LITTERS (b)	3/25 (12%)	6/25 (24%)	4/25 (16%)	8/25 (32%)
POLY-3 RATE (c)	3/43.44	6/47.59	5/42.24	9/41.82
POLY-3 PERCENT (g)	6.9%	12.6%	11.8%	21.5%
TERMINAL (d)	2/36 (6%)	5/42 (12%)	4/35 (11%)	8/37 (22%)
FIRST INCIDENCE	655	679	683	701
STATISTICAL TESTS				
POLY 3	P=0.039*	P=0.289	P=0.341	P=0.050*
POLY 1.5	P=0.042*	P=0.277	P=0.347	P=0.052
POLY 6	P=0.038*	P=0.297	P=0.336	P=0.050*
RAO-SCOTT	P=0.054	P=0.320	P=0.362	P=0.073
LITTER C-A/FISHERS	P=0.085	P=0.232	P=0.500	P=0.085

Experiment Number: 20614 - 02
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Perfluorooctanoic Acid
 CAS Number: 335-67-1

Date Report Requested: 06/07/2018
 Time Report Requested: 14:46:31
 First Dose M/F: 07/27/09 / NA
 Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Extramedullary Hematopoiesis				
LESION RATES				
OVERALL (a)	1/50 (2%)	2/50 (4%)	4/50 (8%)	0/50 (0%)
LITTERS (b)	1/25 (4%)	2/25 (8%)	4/25 (16%)	0/25 (0%)
POLY-3 RATE (c)	1/43.13	2/47.35	4/44.34	0/41.66
POLY-3 PERCENT (g)	2.3%	4.2%	9%	0%
TERMINAL (d)	1/36 (3%)	2/42 (5%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	743 (T)	743 (T)	134	---
STATISTICAL TESTS				
POLY 3	P=0.405N	P=0.532	P=0.187	P=0.507N
POLY 1.5	P=0.397N	P=0.524	P=0.186	P=0.505N
POLY 6	P=0.405N	P=0.538	P=0.189	P=0.506N
RAO-SCOTT	P=0.413N	P=0.562	P=0.232	P=0.538N
LITTER C-A/FISHERS	P=0.370N	P=0.500	P=0.174	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver Fatty Change				
LESION RATES				
OVERALL (a)	0/50 (0%)	1/50 (2%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	1/25 (4%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	1/47.63	2/42.02	0/41.66
POLY-3 PERCENT (g)	0%	2.1%	4.8%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	2/35 (6%)	0/37 (0%)
FIRST INCIDENCE	---	666	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.635N	P=0.520	P=0.231	(e)
POLY 1.5	P=0.631N	P=0.514	P=0.233	(e)
POLY 6	P=0.635N	P=0.524	P=0.230	(e)
RAO-SCOTT	P=0.641N	P=0.628	P=0.328	(e)
LITTER C-A/FISHERS	P=0.617N	P=0.500	P=0.245	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
<hr/>				
Liver				
Fatty Change Focal				
<hr/>				
LESION RATES				
OVERALL (a)	0/50 (0%)	0/50 (0%)	3/50 (6%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	0/25 (0%)	3/25 (12%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	0/47.35	3/42.02	0/41.66
POLY-3 PERCENT (g)	0%	0%	7.1%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	3/35 (9%)	0/37 (0%)
FIRST INCIDENCE	---	---	743 (T)	---
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.501	(e)	P=0.114	(e)
POLY 1.5	P=0.510	(e)	P=0.116	(e)
POLY 6	P=0.501	(e)	P=0.112	(e)
RAO-SCOTT	P=0.568	(e)	P=0.241	(e)
LITTER C-A/FISHERS	P=0.539	(e)	P=0.117	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Inflammation Focal				
<hr/>				
LESION RATES				
OVERALL (a)	15/50 (30%)	19/50 (38%)	18/50 (36%)	24/50 (48%)
LITTERS (b)	11/25 (44%)	16/25 (64%)	15/25 (60%)	17/25 (68%)
POLY-3 RATE (c)	15/43.44	19/47.35	18/42.81	24/42.40
POLY-3 PERCENT (g)	34.5%	40.1%	42%	56.6%
TERMINAL (d)	14/36 (39%)	19/42 (45%)	16/35 (46%)	23/37 (62%)
FIRST INCIDENCE	655	743 (T)	533	473
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.022*	P=0.370	P=0.309	P=0.030*
POLY 1.5	P=0.027*	P=0.342	P=0.318	P=0.033*
POLY 6	P=0.020*	P=0.384	P=0.304	P=0.029*
RAO-SCOTT	P=0.028*	P=0.377	P=0.317	P=0.040*
LITTER C-A/FISHERS	P=0.090	P=0.128	P=0.198	P=0.077

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver				
Mixed Cell Focus				
LESION RATES				
OVERALL (a)	0/50 (0%)	4/50 (8%)	9/50 (18%)	6/50 (12%)
LITTERS (b)	0/25 (0%)	4/25 (16%)	8/25 (32%)	6/25 (24%)
POLY-3 RATE (c)	0/43.13	4/47.35	9/42.02	6/41.72
POLY-3 PERCENT (g)	0%	8.5%	21.4%	14.4%
TERMINAL (d)	0/36 (0%)	4/42 (10%)	9/35 (26%)	5/37 (14%)
FIRST INCIDENCE	---	743 (T)	743 (T)	726
STATISTICAL TESTS				
POLY 3	P=0.017*	P=0.073	P<0.001**	P=0.013*
POLY 1.5	P=0.019*	P=0.070	P<0.001**	P=0.014*
POLY 6	P=0.017*	P=0.076	P<0.001**	P=0.013*
RAO-SCOTT	P=0.032*	P=0.108	P=0.005**	P=0.028*
LITTER C-A/FISHERS	P=0.021*	P=0.055	P=0.002**	P=0.011*

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver Necrosis				
LESION RATES				
OVERALL (a)	2/50 (4%)	17/50 (34%)	23/50 (46%)	20/50 (40%)
LITTERS (b)	2/25 (8%)	14/25 (56%)	18/25 (72%)	16/25 (64%)
POLY-3 RATE (c)	2/43.53	17/47.59	23/43.94	20/44.41
POLY-3 PERCENT (g)	4.6%	35.7%	52.3%	45%
TERMINAL (d)	1/36 (3%)	16/42 (38%)	20/35 (57%)	16/37 (43%)
FIRST INCIDENCE	624	679	134	414
STATISTICAL TESTS				
POLY 3	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 6	P<0.001**	P<0.001**	P<0.001**	P<0.001**
RAO-SCOTT	P<0.001**	P<0.001**	P<0.001**	P<0.001**
LITTER C-A/FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver Pigment				
LESION RATES				
OVERALL (a)	0/50 (0%)	7/50 (14%)	15/50 (30%)	30/50 (60%)
LITTERS (b)	0/25 (0%)	7/25 (28%)	12/25 (48%)	21/25 (84%)
POLY-3 RATE (c)	0/43.13	7/49.14	15/43.01	30/43.29
POLY-3 PERCENT (g)	0%	14.2%	34.9%	69.3%
TERMINAL (d)	0/36 (0%)	3/42 (7%)	13/35 (37%)	27/37 (73%)
FIRST INCIDENCE	---	116	502	414
STATISTICAL TESTS				
POLY 3	P<0.001**	P=0.013*	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P=0.011*	P<0.001**	P<0.001**
POLY 6	P<0.001**	P=0.014*	P<0.001**	P<0.001**
RAO-SCOTT	P<0.001**	P=0.017*	P<0.001**	P<0.001**
LITTER C-A/FISHERS	P<0.001**	P=0.005**	P<0.001**	P<0.001**

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver: Bile Duct Hyperplasia				
LESION RATES				
OVERALL (a)	24/50 (48%)	3/50 (6%)	3/50 (6%)	1/50 (2%)
LITTERS (b)	20/25 (80%)	3/25 (12%)	3/25 (12%)	1/25 (4%)
POLY-3 RATE (c)	24/43.79	3/47.59	3/42.02	1/41.66
POLY-3 PERCENT (g)	54.8%	6.3%	7.1%	2.4%
TERMINAL (d)	21/36 (58%)	2/42 (5%)	3/35 (9%)	1/37 (3%)
FIRST INCIDENCE	655	679	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P<0.001N**	P<0.001N**	P<0.001N**	P<0.001N**
POLY 1.5	P<0.001N**	P<0.001N**	P<0.001N**	P<0.001N**
POLY 6	P<0.001N**	P<0.001N**	P<0.001N**	P<0.001N**
RAO-SCOTT	P<0.001N**	P<0.001N**	P<0.001N**	P<0.001N**
LITTER C-A/FISHERS	P<0.001N**	P<0.001N**	P<0.001N**	P<0.001N**

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver: Hepatocyte Cytoplasmic Alteration				
LESION RATES				
OVERALL (a)	0/50 (0%)	12/50 (24%)	34/50 (68%)	46/50 (92%)
LITTERS (b)	0/25 (0%)	10/25 (40%)	22/25 (88%)	25/25 (100%)
POLY-3 RATE (c)	0/43.13	12/48.77	34/47.21	46/48.75
POLY-3 PERCENT (g)	0%	24.6%	72%	94.4%
TERMINAL (d)	0/36 (0%)	9/42 (21%)	27/35 (77%)	35/37 (95%)
FIRST INCIDENCE	---	116	134	108
STATISTICAL TESTS				
POLY 3	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 6	P<0.001**	P<0.001**	P<0.001**	P<0.001**
RAO-SCOTT	P<0.001**	P<0.001**	P<0.001**	P<0.001**
LITTER C-A/FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver: Hepatocyte Hypertrophy				
LESION RATES				
OVERALL (a)	0/50 (0%)	13/50 (26%)	34/50 (68%)	43/50 (86%)
LITTERS (b)	0/25 (0%)	11/25 (44%)	22/25 (88%)	24/25 (96%)
POLY-3 RATE (c)	0/43.13	13/49.05	34/47.21	43/46.10
POLY-3 PERCENT (g)	0%	26.5%	72%	93.3%
TERMINAL (d)	0/36 (0%)	9/42 (21%)	27/35 (77%)	36/37 (97%)
FIRST INCIDENCE	---	116	134	108
STATISTICAL TESTS				
POLY 3	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 6	P<0.001**	P<0.001**	P<0.001**	P<0.001**
RAO-SCOTT	P<0.001**	P<0.001**	P<0.001**	P<0.001**
LITTER C-A/FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**

Experiment Number: 20614 - 02
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Perfluorooctanoic Acid
 CAS Number: 335-67-1

Date Report Requested: 06/07/2018
 Time Report Requested: 14:46:31
 First Dose M/F: 07/27/09 / NA
 Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Liver: Hepatocyte Single Cell Death				
LESION RATES				
OVERALL (a)	1/50 (2%)	1/50 (2%)	11/50 (22%)	24/50 (48%)
LITTERS (b)	1/25 (4%)	1/25 (4%)	9/25 (36%)	16/25 (64%)
POLY-3 RATE (c)	1/43.38	1/47.35	11/45.65	24/46.14
POLY-3 PERCENT (g)	2.3%	2.1%	24.1%	52%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	7/35 (20%)	19/37 (51%)
FIRST INCIDENCE	675	743 (T)	134	108
STATISTICAL TESTS				
POLY 3	P<0.001**	P=0.741N	P=0.002**	P<0.001**
POLY 1.5	P<0.001**	P=0.746N	P=0.002**	P<0.001**
POLY 6	P<0.001**	P=0.738N	P=0.002**	P<0.001**
RAO-SCOTT	P<0.001**	P=0.756N	P=0.011*	P<0.001**
LITTER C-A/FISHERS	P<0.001**	P=0.755	P=0.005**	P<0.001**

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung				
Foreign Body				
LESION RATES				
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	1/25 (4%)	0/25 (0%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	1/43.13	0/47.35	2/42.65	0/41.66
POLY-3 PERCENT (g)	2.3%	0%	4.7%	0%
TERMINAL (d)	1/36 (3%)	0/42 (0%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	743 (T)	---	535	---
STATISTICAL TESTS				
POLY 3	P=0.489N	P=0.481N	P=0.496	P=0.507N
POLY 1.5	P=0.482N	P=0.486N	P=0.497	P=0.505N
POLY 6	P=0.491N	P=0.478N	P=0.496	P=0.506N
RAO-SCOTT	P=0.515N	P=0.602N	P=0.553	P=0.597N
LITTER C-A/FISHERS	P=0.461N	P=0.500N	P=0.500	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung				
Infiltration Cellular Histiocyte				
<hr/>				
LESION RATES				
OVERALL (a)	23/50 (46%)	28/50 (56%)	25/50 (50%)	22/50 (44%)
LITTERS (b)	18/25 (72%)	17/25 (68%)	17/25 (68%)	16/25 (64%)
POLY-3 RATE (c)	23/44.44	28/47.87	25/46.37	22/44.09
POLY-3 PERCENT (g)	51.8%	58.5%	53.9%	49.9%
TERMINAL (d)	18/36 (50%)	26/42 (62%)	17/35 (49%)	17/37 (46%)
FIRST INCIDENCE	584	666	218	432
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.379N	P=0.329	P=0.501	P=0.515N
POLY 1.5	P=0.370N	P=0.302	P=0.485	P=0.513N
POLY 6	P=0.379N	P=0.333	P=0.505	P=0.515N
RAO-SCOTT	P=0.395N	P=0.353	P=0.509	P=0.520N
LITTER C-A/FISHERS	P=0.332N	P=0.500N	P=0.500N	P=0.381N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung Inflammation Acute				
LESION RATES				
OVERALL (a)	0/50 (0%)	1/50 (2%)	3/50 (6%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	1/25 (4%)	3/25 (12%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	1/47.58	3/42.72	0/41.66
POLY-3 PERCENT (g)	0%	2.1%	7%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	---	680	535	---
STATISTICAL TESTS				
POLY 3	P=0.601	P=0.520	P=0.117	(e)
POLY 1.5	P=0.609	P=0.514	P=0.117	(e)
POLY 6	P=0.601	P=0.524	P=0.117	(e)
RAO-SCOTT	P=0.620	P=0.624	P=0.199	(e)
LITTER C-A/FISHERS	P=0.635	P=0.500	P=0.117	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung				
Inflammation Chronic				
LESION RATES				
OVERALL (a)	5/50 (10%)	4/50 (8%)	5/50 (10%)	5/50 (10%)
LITTERS (b)	4/25 (16%)	4/25 (16%)	5/25 (20%)	4/25 (16%)
POLY-3 RATE (c)	5/43.91	4/47.90	5/42.83	5/41.66
POLY-3 PERCENT (g)	11.4%	8.4%	11.7%	12%
TERMINAL (d)	2/36 (6%)	2/42 (5%)	3/35 (9%)	5/37 (14%)
FIRST INCIDENCE	584	655	533	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.453	P=0.446N	P=0.615	P=0.597
POLY 1.5	P=0.471	P=0.459N	P=0.621	P=0.607
POLY 6	P=0.442	P=0.438N	P=0.609	P=0.592
RAO-SCOTT	P=0.463	P=0.469N	P=0.613	P=0.596
LITTER C-A/FISHERS	P=0.554	P=0.649	P=0.500	P=0.649

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung				
Inflammation Granulomatous Focal				
LESION RATES				
OVERALL (a)	7/50 (14%)	5/50 (10%)	2/50 (4%)	4/50 (8%)
LITTERS (b)	6/25 (24%)	5/25 (20%)	2/25 (8%)	3/25 (12%)
POLY-3 RATE (c)	7/43.13	5/47.35	2/42.02	4/42.40
POLY-3 PERCENT (g)	16.2%	10.6%	4.8%	9.4%
TERMINAL (d)	7/36 (19%)	5/42 (12%)	2/35 (6%)	3/37 (8%)
FIRST INCIDENCE	743 (T)	743 (T)	743 (T)	473
STATISTICAL TESTS				
POLY 3	P=0.201N	P=0.315N	P=0.084N	P=0.270N
POLY 1.5	P=0.196N	P=0.332N	P=0.082N	P=0.270N
POLY 6	P=0.201N	P=0.304N	P=0.085N	P=0.264N
RAO-SCOTT	P=0.234N	P=0.353N	P=0.122N	P=0.306N
LITTER C-A/FISHERS	P=0.134N	P=0.500N	P=0.123N	P=0.232N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lung: Alveolar Epithelium Hyperplasia				
LESION RATES				
OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	2/50 (4%)
LITTERS (b)	1/25 (4%)	2/25 (8%)	2/25 (8%)	2/25 (8%)
POLY-3 RATE (c)	1/43.13	2/47.35	2/42.02	2/41.66
POLY-3 PERCENT (g)	2.3%	4.2%	4.8%	4.8%
TERMINAL (d)	1/36 (3%)	2/42 (5%)	2/35 (6%)	2/37 (5%)
FIRST INCIDENCE	743 (T)	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.394	P=0.532	P=0.491	P=0.488
POLY 1.5	P=0.401	P=0.524	P=0.494	P=0.491
POLY 6	P=0.394	P=0.538	P=0.489	P=0.489
RAO-SCOTT	P=0.392	P=0.531	P=0.479	P=0.475
LITTER C-A/FISHERS	P=0.421	P=0.500	P=0.500	P=0.500

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lymph Node, Mandibular Atrophy				
LESION RATES				
OVERALL (a)	0/49 (0%)	0/50 (0%)	1/50 (2%)	2/49 (4%)
LITTERS (b)	0/25 (0%)	0/25 (0%)	1/25 (4%)	2/25 (8%)
POLY-3 RATE (c)	0/42.22	0/47.35	1/42.02	2/42.23
POLY-3 PERCENT (g)	0%	0%	2.4%	4.7%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	1/35 (3%)	1/37 (3%)
FIRST INCIDENCE	---	---	743 (T)	432
STATISTICAL TESTS				
POLY 3	P=0.064	(e)	P=0.499	P=0.237
POLY 1.5	P=0.065	(e)	P=0.501	P=0.236
POLY 6	P=0.064	(e)	P=0.497	P=0.239
RAO-SCOTT	P=0.127	(e)	P=0.590	P=0.340
LITTER C-A/FISHERS	P=0.069	(e)	P=0.500	P=0.245

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lymph Node, Mandibular Ectasia				
LESION RATES				
OVERALL (a)	3/49 (6%)	0/50 (0%)	1/50 (2%)	0/49 (0%)
LITTERS (b)	3/25 (12%)	0/25 (0%)	1/25 (4%)	0/25 (0%)
POLY-3 RATE (c)	3/42.22	0/47.35	1/42.02	0/41.43
POLY-3 PERCENT (g)	7.1%	0%	2.4%	0%
TERMINAL (d)	3/36 (8%)	0/42 (0%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	743 (T)	---	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.095N	P=0.099N	P=0.307N	P=0.122N
POLY 1.5	P=0.092N	P=0.103N	P=0.303N	P=0.121N
POLY 6	P=0.096N	P=0.097N	P=0.309N	P=0.120N
RAO-SCOTT	P=0.152N	P=0.188N	P=0.380N	P=0.206N
LITTER C-A/FISHERS	P=0.084N	P=0.117N	P=0.305N	P=0.117N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lymph Node, Mandibular Hyperplasia Lymphoid				
LESION RATES				
OVERALL (a)	2/49 (4%)	2/50 (4%)	0/50 (0%)	1/49 (2%)
LITTERS (b)	2/25 (8%)	2/25 (8%)	0/25 (0%)	1/25 (4%)
POLY-3 RATE (c)	2/42.22	2/47.35	0/42.02	1/41.43
POLY-3 PERCENT (g)	4.7%	4.2%	0%	2.4%
TERMINAL (d)	2/36 (6%)	2/42 (5%)	0/35 (0%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	743 (T)	---	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.308N	P=0.652N	P=0.238N	P=0.507N
POLY 1.5	P=0.305N	P=0.661N	P=0.236N	P=0.506N
POLY 6	P=0.309N	P=0.646N	P=0.240N	P=0.504N
RAO-SCOTT	P=0.336N	P=0.660N	P=0.277N	P=0.521N
LITTER C-A/FISHERS	P=0.294N	P=0.695	P=0.245N	P=0.500N

Experiment Number: 20614 - 02
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Perfluorooctanoic Acid
 CAS Number: 335-67-1

Date Report Requested: 06/07/2018
 Time Report Requested: 14:46:31
 First Dose M/F: 07/27/09 / NA
 Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lymph Node, Mandibular Infiltration Cellular Plasma Cell				
LESION RATES				
OVERALL (a)	2/49 (4%)	2/50 (4%)	0/50 (0%)	4/49 (8%)
LITTERS (b)	2/25 (8%)	2/25 (8%)	0/25 (0%)	4/25 (16%)
POLY-3 RATE (c)	2/42.22	2/47.67	0/42.02	4/41.43
POLY-3 PERCENT (g)	4.7%	4.2%	0%	9.7%
TERMINAL (d)	2/36 (6%)	1/42 (2%)	0/35 (0%)	4/37 (11%)
FIRST INCIDENCE	743 (T)	655	---	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.212	P=0.649N	P=0.238N	P=0.328
POLY 1.5	P=0.217	P=0.659N	P=0.236N	P=0.329
POLY 6	P=0.210	P=0.642N	P=0.240N	P=0.331
RAO-SCOTT	P=0.238	P=0.658N	P=0.276N	P=0.354
LITTER C-A/FISHERS	P=0.227	P=0.695	P=0.245N	P=0.334

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Lymph Node, Mesenteric Hyperplasia Lymphoid				
LESION RATES				
OVERALL (a)	1/49 (2%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
LITTERS (b)	1/25 (4%)	0/25 (0%)	0/25 (0%)	2/25 (8%)
POLY-3 RATE (c)	1/42.22	0/47.35	0/42.02	2/41.66
POLY-3 PERCENT (g)	2.4%	0%	0%	4.8%
TERMINAL (d)	1/36 (3%)	0/42 (0%)	0/35 (0%)	2/37 (5%)
FIRST INCIDENCE	743 (T)	---	---	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.231	P=0.477N	P=0.501N	P=0.495
POLY 1.5	P=0.236	P=0.482N	P=0.499N	P=0.498
POLY 6	P=0.229	P=0.474N	P=0.503N	P=0.496
RAO-SCOTT	P=0.309	P=0.606N	P=0.601N	P=0.554
LITTER C-A/FISHERS	P=0.244	P=0.500N	P=0.500N	P=0.500

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Nose: Glands, Respiratory Epithelium Inflammation				
LESION RATES				
OVERALL (a)	0/50 (0%)	3/50 (6%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	3/25 (12%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	3/47.58	2/42.02	0/41.66
POLY-3 PERCENT (g)	0%	6.3%	4.8%	0%
TERMINAL (d)	0/36 (0%)	2/42 (5%)	2/35 (6%)	0/37 (0%)
FIRST INCIDENCE	---	680	743 (T)	---
STATISTICAL TESTS				
POLY 3	P=0.424N	P=0.138	P=0.231	(e)
POLY 1.5	P=0.420N	P=0.132	P=0.233	(e)
POLY 6	P=0.422N	P=0.142	P=0.230	(e)
RAO-SCOTT	P=0.463N	P=0.221	P=0.314	(e)
LITTER C-A/FISHERS	P=0.408N	P=0.117	P=0.245	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Nose: Olfactory Epithelium Accumulation, Hyaline Droplet				
LESION RATES				
OVERALL (a)	40/50 (80%)	44/50 (88%)	42/50 (84%)	37/50 (74%)
LITTERS (b)	24/25 (96%)	25/25 (100%)	25/25 (100%)	23/25 (92%)
POLY-3 RATE (c)	40/46.56	44/48.27	42/46.70	37/46.42
POLY-3 PERCENT (g)	85.9%	91.2%	89.9%	79.7%
TERMINAL (d)	32/36 (89%)	40/42 (95%)	33/35 (94%)	29/37 (78%)
FIRST INCIDENCE	302	666	314	414
STATISTICAL TESTS				
POLY 3	P=0.148N	P=0.307	P=0.386	P=0.298N
POLY 1.5	P=0.166N	P=0.281	P=0.369	P=0.321N
POLY 6	P=0.119N	P=0.312	P=0.418	P=0.269N
RAO-SCOTT	P=0.189N	P=0.353	P=0.419	P=0.335N
LITTER C-A/FISHERS	P=0.244N	P=0.500	P=0.500	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Nose: Olfactory Epithelium, Respiratory Epithelium Inflammation				
LESION RATES				
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	1/25 (4%)	0/25 (0%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	1/43.22	0/47.35	2/42.60	0/41.66
POLY-3 PERCENT (g)	2.3%	0%	4.7%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	718	---	557	---
STATISTICAL TESTS				
POLY 3	P=0.489N	P=0.482N	P=0.495	P=0.507N
POLY 1.5	P=0.482N	P=0.486N	P=0.497	P=0.506N
POLY 6	P=0.492N	P=0.479N	P=0.494	P=0.507N
RAO-SCOTT	P=0.516N	P=0.604N	P=0.553	P=0.598N
LITTER C-A/FISHERS	P=0.461N	P=0.500N	P=0.500	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Nose: Respiratory Epithelium Inflammation				
LESION RATES				
OVERALL (a)	4/50 (8%)	3/50 (6%)	1/50 (2%)	1/50 (2%)
LITTERS (b)	3/25 (12%)	3/25 (12%)	1/25 (4%)	1/25 (4%)
POLY-3 RATE (c)	4/43.64	3/47.35	1/42.02	1/41.66
POLY-3 PERCENT (g)	9.2%	6.3%	2.4%	2.4%
TERMINAL (d)	2/36 (6%)	3/42 (7%)	1/35 (3%)	1/37 (3%)
FIRST INCIDENCE	655	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.105N	P=0.456N	P=0.190N	P=0.193N
POLY 1.5	P=0.102N	P=0.466N	P=0.185N	P=0.189N
POLY 6	P=0.107N	P=0.452N	P=0.195N	P=0.194N
RAO-SCOTT	P=0.158N	P=0.503N	P=0.261N	P=0.263N
LITTER C-A/FISHERS	P=0.159N	P=0.666	P=0.305N	P=0.305N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Pancreas				
Inflammation Chronic				
LESION RATES				
OVERALL (a)	0/50 (0%)	4/50 (8%)	2/50 (4%)	4/50 (8%)
LITTERS (b)	0/25 (0%)	4/25 (16%)	2/25 (8%)	4/25 (16%)
POLY-3 RATE (c)	0/43.13	4/47.35	2/42.02	4/41.66
POLY-3 PERCENT (g)	0%	8.5%	4.8%	9.6%
TERMINAL (d)	0/36 (0%)	4/42 (10%)	2/35 (6%)	4/37 (11%)
FIRST INCIDENCE	---	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.100	P=0.073	P=0.231	P=0.056
POLY 1.5	P=0.103	P=0.070	P=0.233	P=0.057
POLY 6	P=0.100	P=0.076	P=0.230	P=0.056
RAO-SCOTT	P=0.117	P=0.103	P=0.260	P=0.079
LITTER C-A/FISHERS	P=0.108	P=0.055	P=0.245	P=0.055

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Pancreas: Acinus Atrophy				
LESION RATES				
OVERALL (a)	13/50 (26%)	10/50 (20%)	12/50 (24%)	7/50 (14%)
LITTERS (b)	12/25 (48%)	10/25 (40%)	11/25 (44%)	7/25 (28%)
POLY-3 RATE (c)	13/44.47	10/47.35	12/42.02	7/41.66
POLY-3 PERCENT (g)	29.2%	21.1%	28.6%	16.8%
TERMINAL (d)	11/36 (31%)	10/42 (24%)	12/35 (34%)	7/37 (19%)
FIRST INCIDENCE	302	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.163N	P=0.256N	P=0.566N	P=0.133N
POLY 1.5	P=0.147N	P=0.271N	P=0.544N	P=0.125N
POLY 6	P=0.168N	P=0.247N	P=0.585N	P=0.134N
RAO-SCOTT	P=0.160N	P=0.259N	P=0.557N	P=0.135N
LITTER C-A/FISHERS	P=0.107N	P=0.388N	P=0.500N	P=0.122N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Pancreas: Acinus Hyperplasia				
LESION RATES				
OVERALL (a)	18/50 (36%)	32/50 (64%)	37/50 (74%)	31/50 (62%)
LITTERS (b)	15/25 (60%)	21/25 (84%)	24/25 (96%)	21/25 (84%)
POLY-3 RATE (c)	18/43.64	32/47.67	37/44.35	31/42.84
POLY-3 PERCENT (g)	41.3%	67.1%	83.4%	72.4%
TERMINAL (d)	17/36 (47%)	31/42 (74%)	31/35 (89%)	29/37 (78%)
FIRST INCIDENCE	584	655	502	478
STATISTICAL TESTS				
POLY 3	P=0.002**	P=0.009**	P<0.001**	P=0.002**
POLY 1.5	P=0.003**	P=0.007**	P<0.001**	P=0.003**
POLY 6	P<0.001**	P=0.010**	P<0.001**	P=0.002**
RAO-SCOTT	P=0.004**	P=0.014*	P<0.001**	P=0.004**
LITTER C-A/FISHERS	P=0.039*	P=0.057	P=0.002**	P=0.057

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Parathyroid Gland Hyperplasia				
LESION RATES				
OVERALL (a)	2/41 (5%)	1/44 (2%)	1/38 (3%)	1/41 (2%)
LITTERS (b)	2/25 (8%)	1/24 (4%)	1/24 (4%)	1/23 (4%)
POLY-3 RATE (c)	2/35.47	1/41.67	1/31.06	1/35.61
POLY-3 PERCENT (g)	5.6%	2.4%	3.2%	2.8%
TERMINAL (d)	1/29 (3%)	0/36 (0%)	0/26 (0%)	0/31 (0%)
FIRST INCIDENCE	655	655	697	609
STATISTICAL TESTS				
POLY 3	P=0.438N	P=0.444N	P=0.546N	P=0.499N
POLY 1.5	P=0.433N	P=0.452N	P=0.541N	P=0.500N
POLY 6	P=0.438N	P=0.438N	P=0.549N	P=0.494N
RAO-SCOTT	P=0.437N	P=0.455N	P=0.536N	P=0.498N
LITTER C-A/FISHERS	P=0.433N	P=0.516N	P=0.516N	P=0.532N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Pituitary Gland: Pars Distalis Hyperplasia				
LESION RATES				
OVERALL (a)	23/50 (46%)	19/50 (38%)	24/50 (48%)	18/50 (36%)
LITTERS (b)	16/25 (64%)	17/25 (68%)	16/25 (64%)	15/25 (60%)
POLY-3 RATE (c)	23/43.91	19/47.91	24/43.52	18/41.66
POLY-3 PERCENT (g)	52.4%	39.7%	55.2%	43.2%
TERMINAL (d)	20/36 (56%)	17/42 (41%)	21/35 (60%)	18/37 (49%)
FIRST INCIDENCE	584	666	502	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.386N	P=0.154N	P=0.482	P=0.262N
POLY 1.5	P=0.343N	P=0.181N	P=0.489	P=0.243N
POLY 6	P=0.411N	P=0.137N	P=0.475	P=0.271N
RAO-SCOTT	P=0.378N	P=0.171N	P=0.481	P=0.273N
LITTER C-A/FISHERS	P=0.389N	P=0.500	P=0.616	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Prostate Inflammation				
LESION RATES				
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
LITTERS (b)	0/25 (0%)	0/25 (0%)	2/25 (8%)	0/25 (0%)
POLY-3 RATE (c)	0/43.13	0/47.35	2/42.19	0/41.66
POLY-3 PERCENT (g)	0%	0%	4.7%	0%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	1/35 (3%)	0/37 (0%)
FIRST INCIDENCE	---	---	697	---
STATISTICAL TESTS				
POLY 3	P=0.563	(e)	P=0.232	(e)
POLY 1.5	P=0.571	(e)	P=0.234	(e)
POLY 6	P=0.563	(e)	P=0.231	(e)
RAO-SCOTT	P=0.627	(e)	P=0.388	(e)
LITTER C-A/FISHERS	P=0.595	(e)	P=0.245	(e)

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Prostate: Dorsal Inflammation Chronic				
LESION RATES				
OVERALL (a)	0/50 (0%)	1/50 (2%)	1/50 (2%)	2/50 (4%)
LITTERS (b)	0/25 (0%)	1/25 (4%)	1/25 (4%)	2/25 (8%)
POLY-3 RATE (c)	0/43.13	1/47.35	1/42.02	2/41.66
POLY-3 PERCENT (g)	0%	2.1%	2.4%	4.8%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	1/35 (3%)	2/37 (5%)
FIRST INCIDENCE	---	743 (T)	743 (T)	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.141	P=0.519	P=0.495	P=0.229
POLY 1.5	P=0.144	P=0.514	P=0.497	P=0.231
POLY 6	P=0.141	P=0.522	P=0.493	P=0.230
RAO-SCOTT	P=0.177	P=0.578	P=0.535	P=0.281
LITTER C-A/FISHERS	P=0.150	P=0.500	P=0.500	P=0.245

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Prostate: Epithelium, Ventral Hyperplasia				
LESION RATES				
OVERALL (a)	5/50 (10%)	2/50 (4%)	2/50 (4%)	3/50 (6%)
LITTERS (b)	5/25 (20%)	2/25 (8%)	2/25 (8%)	3/25 (12%)
POLY-3 RATE (c)	5/43.53	2/47.35	2/42.02	3/41.72
POLY-3 PERCENT (g)	11.5%	4.2%	4.8%	7.2%
TERMINAL (d)	4/36 (11%)	2/42 (5%)	2/35 (6%)	2/37 (5%)
FIRST INCIDENCE	624	743 (T)	743 (T)	726
STATISTICAL TESTS				
POLY 3	P=0.381N	P=0.184N	P=0.230N	P=0.380N
POLY 1.5	P=0.371N	P=0.191N	P=0.225N	P=0.374N
POLY 6	P=0.385N	P=0.179N	P=0.235N	P=0.380N
RAO-SCOTT	P=0.385N	P=0.205N	P=0.244N	P=0.385N
LITTER C-A/FISHERS	P=0.339N	P=0.209N	P=0.209N	P=0.351N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Prostate: Ventral Inflammation Chronic				
LESION RATES				
OVERALL (a)	4/50 (8%)	3/50 (6%)	8/50 (16%)	9/50 (18%)
LITTERS (b)	4/25 (16%)	3/25 (12%)	8/25 (32%)	8/25 (32%)
POLY-3 RATE (c)	4/43.13	3/47.58	8/42.12	9/44.07
POLY-3 PERCENT (g)	9.3%	6.3%	19%	20.4%
TERMINAL (d)	4/36 (11%)	2/42 (5%)	6/35 (17%)	5/37 (14%)
FIRST INCIDENCE	743 (T)	680	725	108
STATISTICAL TESTS				
POLY 3	P=0.033*	P=0.447N	P=0.163	P=0.122
POLY 1.5	P=0.034*	P=0.461N	P=0.168	P=0.120
POLY 6	P=0.034*	P=0.435N	P=0.161	P=0.129
RAO-SCOTT	P=0.044*	P=0.452N	P=0.176	P=0.136
LITTER C-A/FISHERS	P=0.059	P=0.500N	P=0.160	P=0.160

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Salivary Glands				
Atrophy				
<hr/>				
LESION RATES				
OVERALL (a)	2/49 (4%)	0/50 (0%)	0/50 (0%)	1/49 (2%)
LITTERS (b)	2/25 (8%)	0/25 (0%)	0/25 (0%)	1/25 (4%)
POLY-3 RATE (c)	2/42.22	0/47.35	0/42.02	1/41.43
POLY-3 PERCENT (g)	4.7%	0%	0%	2.4%
TERMINAL (d)	2/36 (6%)	0/42 (0%)	0/35 (0%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	---	---	743 (T)
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.481N	P=0.213N	P=0.238N	P=0.507N
POLY 1.5	P=0.476N	P=0.218N	P=0.236N	P=0.506N
POLY 6	P=0.485N	P=0.209N	P=0.240N	P=0.504N
RAO-SCOTT	P=0.515N	P=0.327N	P=0.337N	P=0.559N
LITTER C-A/FISHERS	P=0.461N	P=0.245N	P=0.245N	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
<hr/>				
Skin				
Foreign Body				
<hr/>				
LESION RATES				
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
LITTERS (b)	2/25 (8%)	0/25 (0%)	0/25 (0%)	1/25 (4%)
POLY-3 RATE (c)	2/43.22	0/47.35	0/42.02	1/41.82
POLY-3 PERCENT (g)	4.6%	0%	0%	2.4%
TERMINAL (d)	1/36 (3%)	0/42 (0%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	718	---	---	701
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.479N	P=0.218N	P=0.243N	P=0.512N
POLY 1.5	P=0.474N	P=0.222N	P=0.241N	P=0.509N
POLY 6	P=0.483N	P=0.214N	P=0.245N	P=0.510N
RAO-SCOTT	P=0.516N	P=0.334N	P=0.344N	P=0.562N
LITTER C-A/FISHERS	P=0.461N	P=0.245N	P=0.245N	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Skin Inflammation				
LESION RATES				
OVERALL (a)	4/50 (8%)	0/50 (0%)	1/50 (2%)	2/50 (4%)
LITTERS (b)	4/25 (16%)	0/25 (0%)	1/25 (4%)	2/25 (8%)
POLY-3 RATE (c)	4/43.74	0/47.35	1/42.02	2/41.82
POLY-3 PERCENT (g)	9.2%	0%	2.4%	4.8%
TERMINAL (d)	2/36 (6%)	0/42 (0%)	1/35 (3%)	1/37 (3%)
FIRST INCIDENCE	584	---	743 (T)	701
STATISTICAL TESTS				
POLY 3	P=0.403N	P=0.051N	P=0.191N	P=0.358N
POLY 1.5	P=0.395N	P=0.053N	P=0.186N	P=0.352N
POLY 6	P=0.407N	P=0.050N*	P=0.195N	P=0.358N
RAO-SCOTT	P=0.422N	P=0.092N	P=0.237N	P=0.391N
LITTER C-A/FISHERS	P=0.370N	P=0.055N	P=0.174N	P=0.334N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Spleen				
Extramedullary Hematopoiesis				
LESION RATES				
OVERALL (a)	37/50 (74%)	45/50 (90%)	38/50 (76%)	37/50 (74%)
LITTERS (b)	24/25 (96%)	24/25 (96%)	23/25 (92%)	25/25 (100%)
POLY-3 RATE (c)	37/45.00	45/48.49	38/43.93	37/43.16
POLY-3 PERCENT (g)	82.2%	92.8%	86.5%	85.7%
TERMINAL (d)	33/36 (92%)	40/42 (95%)	32/35 (91%)	32/37 (87%)
FIRST INCIDENCE	302	655	502	473
STATISTICAL TESTS				
POLY 3	P=0.546	P=0.092	P=0.390	P=0.434
POLY 1.5	P=0.496N	P=0.065	P=0.420	P=0.469
POLY 6	P=0.545	P=0.123	P=0.384	P=0.457
RAO-SCOTT	P=0.531	P=0.103	P=0.384	P=0.424
LITTER C-A/FISHERS	P=0.365	P=0.755	P=0.500N	P=0.500

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Spleen Pigment				
LESION RATES				
OVERALL (a)	30/50 (60%)	42/50 (84%)	31/50 (62%)	27/50 (54%)
LITTERS (b)	21/25 (84%)	24/25 (96%)	21/25 (84%)	21/25 (84%)
POLY-3 RATE (c)	30/48.97	42/49.05	31/46.39	27/43.60
POLY-3 PERCENT (g)	61.3%	85.6%	66.8%	61.9%
TERMINAL (d)	20/36 (56%)	38/42 (91%)	22/35 (63%)	23/37 (62%)
FIRST INCIDENCE	137	116	218	194
STATISTICAL TESTS				
POLY 3	P=0.279N	P=0.004**	P=0.362	P=0.559
POLY 1.5	P=0.212N	P=0.005**	P=0.389	P=0.546N
POLY 6	P=0.313N	P=0.003**	P=0.354	P=0.528
RAO-SCOTT	P=0.277N	P=0.009**	P=0.371	P=0.557
LITTER C-A/FISHERS	P=0.401N	P=0.174	P=0.649	P=0.649

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Spleen: Lymphoid Follicle Atrophy				
LESION RATES				
OVERALL (a)	3/50 (6%)	2/50 (4%)	4/50 (8%)	7/50 (14%)
LITTERS (b)	3/25 (12%)	2/25 (8%)	4/25 (16%)	6/25 (24%)
POLY-3 RATE (c)	3/43.65	2/47.82	4/45.17	7/45.23
POLY-3 PERCENT (g)	6.9%	4.2%	8.9%	15.5%
TERMINAL (d)	0/36 (0%)	0/42 (0%)	0/35 (0%)	1/37 (3%)
FIRST INCIDENCE	675	679	218	108
STATISTICAL TESTS				
POLY 3	P=0.054	P=0.459N	P=0.519	P=0.172
POLY 1.5	P=0.056	P=0.469N	P=0.516	P=0.172
POLY 6	P=0.054	P=0.452N	P=0.518	P=0.174
RAO-SCOTT	P=0.078	P=0.482N	P=0.530	P=0.204
LITTER C-A/FISHERS	P=0.101	P=0.500N	P=0.500	P=0.232

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Stomach, Forestomach Inflammation				
LESION RATES				
OVERALL (a)	3/50 (6%)	4/50 (8%)	1/50 (2%)	1/50 (2%)
LITTERS (b)	3/25 (12%)	3/25 (12%)	1/25 (4%)	1/25 (4%)
POLY-3 RATE (c)	3/44.48	4/48.05	1/43.01	1/42.39
POLY-3 PERCENT (g)	6.7%	8.3%	2.3%	2.4%
TERMINAL (d)	0/36 (0%)	1/42 (2%)	0/35 (0%)	0/37 (0%)
FIRST INCIDENCE	194	666	134	478
STATISTICAL TESTS				
POLY 3	P=0.152N	P=0.542	P=0.317N	P=0.323N
POLY 1.5	P=0.148N	P=0.529	P=0.312N	P=0.320N
POLY 6	P=0.154N	P=0.552	P=0.322N	P=0.322N
RAO-SCOTT	P=0.207N	P=0.576	P=0.383N	P=0.386N
LITTER C-A/FISHERS	P=0.159N	P=0.666	P=0.305N	P=0.305N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Stomach, Forestomach: Epithelium Hyperplasia				
LESION RATES				
OVERALL (a)	5/50 (10%)	3/50 (6%)	2/50 (4%)	4/50 (8%)
LITTERS (b)	5/25 (20%)	3/25 (12%)	2/25 (8%)	4/25 (16%)
POLY-3 RATE (c)	5/44.48	3/47.77	2/43.01	4/41.66
POLY-3 PERCENT (g)	11.2%	6.3%	4.7%	9.6%
TERMINAL (d)	2/36 (6%)	1/42 (2%)	1/35 (3%)	4/37 (11%)
FIRST INCIDENCE	194	680	134	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.508N	P=0.318N	P=0.230N	P=0.541N
POLY 1.5	P=0.496N	P=0.329N	P=0.224N	P=0.532N
POLY 6	P=0.516N	P=0.310N	P=0.235N	P=0.544N
RAO-SCOTT	P=0.510N	P=0.326N	P=0.234N	P=0.532N
LITTER C-A/FISHERS	P=0.461N	P=0.351N	P=0.209N	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Testes				
Edema				
<hr/>				
LESION RATES				
OVERALL (a)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)
LITTERS (b)	2/25 (8%)	1/25 (4%)	0/25 (0%)	1/25 (4%)
POLY-3 RATE (c)	2/43.13	1/47.35	0/42.02	1/41.66
POLY-3 PERCENT (g)	4.6%	2.1%	0%	2.4%
TERMINAL (d)	2/36 (6%)	1/42 (2%)	0/35 (0%)	1/37 (3%)
FIRST INCIDENCE	743 (T)	743 (T)	---	743 (T)
<hr/>				
STATISTICAL TESTS				
POLY 3	P=0.382N	P=0.467N	P=0.243N	P=0.512N
POLY 1.5	P=0.378N	P=0.476N	P=0.241N	P=0.509N
POLY 6	P=0.384N	P=0.462N	P=0.244N	P=0.511N
RAO-SCOTT	P=0.402N	P=0.497N	P=0.281N	P=0.524N
LITTER C-A/FISHERS	P=0.365N	P=0.500N	P=0.245N	P=0.500N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

Time Report Requested: 14:46:31

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Testes: Bilateral, Germinal Epithelium Degeneration				
LESION RATES				
OVERALL (a)	6/50 (12%)	3/50 (6%)	4/50 (8%)	3/50 (6%)
LITTERS (b)	5/25 (20%)	3/25 (12%)	4/25 (16%)	3/25 (12%)
POLY-3 RATE (c)	6/43.44	3/47.67	4/42.22	3/41.66
POLY-3 PERCENT (g)	13.8%	6.3%	9.5%	7.2%
TERMINAL (d)	5/36 (14%)	2/42 (5%)	2/35 (6%)	3/37 (8%)
FIRST INCIDENCE	655	655	697	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.283N	P=0.199N	P=0.387N	P=0.262N
POLY 1.5	P=0.271N	P=0.210N	P=0.381N	P=0.257N
POLY 6	P=0.288N	P=0.191N	P=0.392N	P=0.263N
RAO-SCOTT	P=0.296N	P=0.232N	P=0.403N	P=0.287N
LITTER C-A/FISHERS	P=0.335N	P=0.351N	P=0.500N	P=0.351N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/07/2018

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Testes: Germinal Epithelium Degeneration				
LESION RATES				
OVERALL (a)	14/50 (28%)	6/50 (12%)	11/50 (22%)	7/50 (14%)
LITTERS (b)	12/25 (48%)	6/25 (24%)	9/25 (36%)	6/25 (24%)
POLY-3 RATE (c)	14/44.55	6/47.90	11/43.48	7/42.40
POLY-3 PERCENT (g)	31.4%	12.5%	25.3%	16.5%
TERMINAL (d)	11/36 (31%)	4/42 (10%)	6/35 (17%)	6/37 (16%)
FIRST INCIDENCE	304	655	241	473
STATISTICAL TESTS				
POLY 3	P=0.169N	P=0.023N*	P=0.344N	P=0.083N
POLY 1.5	P=0.156N	P=0.027N*	P=0.335N	P=0.080N
POLY 6	P=0.174N	P=0.021N*	P=0.349N	P=0.083N
RAO-SCOTT	P=0.181N	P=0.037N*	P=0.359N	P=0.104N
LITTER C-A/FISHERS	P=0.104N	P=0.070N	P=0.284N	P=0.070N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

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Date Report Requested: 06/07/2018

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Thymus Atrophy				
LESION RATES				
OVERALL (a)	45/48 (94%)	45/46 (98%)	47/48 (98%)	47/49 (96%)
LITTERS (b)	25/25 (100%)	24/24 (100%)	25/25 (100%)	25/25 (100%)
POLY-3 RATE (c)	45/45.67	45/46.00	47/47.93	47/47.20
POLY-3 PERCENT (g)	98.5%	97.8%	98.1%	99.6%
TERMINAL (d)	35/35 (100%)	39/40 (98%)	34/34 (100%)	37/37 (100%)
FIRST INCIDENCE	194	116	134	161
STATISTICAL TESTS				
POLY 3	P=0.446	P=0.717N	P=0.758N	P=0.794
POLY 1.5	P=0.437	P=0.755	P=0.740	P=0.652
POLY 6	P=0.473	P=0.634N	P=0.712N	P=0.971
RAO-SCOTT	P=0.475	P=0.722N	P=0.751N	P=0.739
LITTER C-A/FISHERS	(e)	P=1.000	P=1.000	P=1.000

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

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Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Thyroid Gland: C-Cell Hyperplasia				
LESION RATES				
OVERALL (a)	11/49 (22%)	12/50 (24%)	8/50 (16%)	7/49 (14%)
LITTERS (b)	10/25 (40%)	11/25 (44%)	8/25 (32%)	7/25 (28%)
POLY-3 RATE (c)	11/42.22	12/48.05	8/42.24	7/41.43
POLY-3 PERCENT (g)	26.1%	25%	18.9%	16.9%
TERMINAL (d)	11/36 (31%)	9/42 (21%)	7/35 (20%)	7/37 (19%)
FIRST INCIDENCE	743 (T)	666	683	743 (T)
STATISTICAL TESTS				
POLY 3	P=0.153N	P=0.549N	P=0.301N	P=0.226N
POLY 1.5	P=0.146N	P=0.582N	P=0.296N	P=0.225N
POLY 6	P=0.155N	P=0.520N	P=0.303N	P=0.220N
RAO-SCOTT	P=0.157N	P=0.545N	P=0.299N	P=0.227N
LITTER C-A/FISHERS	P=0.162N	P=0.500	P=0.384N	P=0.276N

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Perfluorooctanoic Acid

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Males			
	0/0 ppm	0/20 ppm	0/40 ppm	0/80 ppm
Thyroid Gland: Follicular Cell Hypertrophy				
LESION RATES				
OVERALL (a)	8/49 (16%)	12/50 (24%)	7/50 (14%)	11/49 (22%)
LITTERS (b)	8/25 (32%)	11/25 (44%)	5/25 (20%)	10/25 (40%)
POLY-3 RATE (c)	8/43.83	12/48.81	7/43.01	11/42.17
POLY-3 PERCENT (g)	18.3%	24.6%	16.3%	26.1%
TERMINAL (d)	5/36 (14%)	9/42 (21%)	3/35 (9%)	10/37 (27%)
FIRST INCIDENCE	137	116	557	473
STATISTICAL TESTS				
POLY 3	P=0.310	P=0.314	P=0.516N	P=0.270
POLY 1.5	P=0.322	P=0.297	P=0.509N	P=0.275
POLY 6	P=0.306	P=0.325	P=0.519N	P=0.270
RAO-SCOTT	P=0.307	P=0.322	P=0.511N	P=0.274
LITTER C-A/FISHERS	P=0.472	P=0.280	P=0.260N	P=0.384

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

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Lab: BAT

LEGEND

- (a) Number of tumor-bearing animals/number of animals examined at site.
- (b) Number of litters with tumor-bearing animals/number of litters examined at site
- (c) Number of tumor-bearing animals/Poly-3 number
- (d) Observed incidence at terminal kill.
- (e) Value of statistic cannot be computed.
- (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
- (g) Poly-3 adjusted lifetime tumor incidence.
- (I) Interim sacrifice
- (T) Terminal sacrifice
- # Tumor rates based on numbers of animals necropsied.
- * To the right of any statistical result, indicates significance at ($P \leq 0.05$).
- ** To the right of any statistical result, indicates significance at ($P \leq 0.01$).
- N Indicates a negative trend for all tests
The Rao-Scott statistic performs the Poly-3 test with an adjustment for within-litter correlation.
The Litter C-A/Fishers statistic compares directly the litter incidence rates.

*** END OF REPORT ***