

**Experiment Number:** 20614 - 01  
**Test Type:** CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
Perfluorooctanoic Acid  
**CAS Number:** 335-67-1

**Date Report Requested:** 03/13/2022  
**Time Report Requested:** 11:36:29  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

Custom Rpt (Litter-Based) -- 0-0, 150-300, 300-1000

<b>NTP Study Number:</b>	C20614		
<b>Lock Date:</b>	01/10/2012		
<b>Cage Range:</b>	ALL		
<b>Date Range:</b>	ALL		
<b>Reasons For Removal:</b>	25021 TSAC	25020 NATD	25019 MSAC
	25016 Aborted		
<b>Removal Date Range:</b>	ALL		
<b>Treatment Groups:</b>	Include 002 0/0 ppm	Include 006 150/300 ppm	Include 010 300/1000 ppm
<b>Study Gender:</b>	Both		
<b>TDMSE Version:</b>	2.5.0.0_SFH		
<b>PWG Approval Date:</b>	07/25/2018		

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**FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE BASED ON NUMBER OF TISSUES EXAMINED.  
IN OTHER TISSUES/ORGANS RATES ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.**

Adrenal Cortex  
Adrenal Medulla  
Islets, Pancreatic  
Liver  
Pancreas  
Pituitary Gland  
Thyroid Gland  
Uterus

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

**FEMALE RATS**

**Organ**

Liver

Mammary Gland

Pancreas

Pituitary Gland: Pars Distalis or Unspecified Site

All Organs

**Morphology**

Hepatocellular Carcinoma

Fibroadenoma

Fibroma, Fibroadenoma or Adenoma

Fibroma, Fibroadenoma, Carcinoma, or Adenoma

Adenoma

Carcinoma or Adenoma

Adenoma

Benign Tumors

Malignant Tumors

Malignant and Benign Tumors

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

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DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Adrenal Cortex</b>			
<b>Adenoma</b>			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	2/50 (4%)	1/50 (2%)	0/50 (0%)
LITTERS (b)	2/32 (6%)	1/29 (3%)	0/30 (0%)
POLY-3 RATE (c)	2/37.06	1/41.44	0/37.22
POLY-3 PERCENT (g)	5.4%	2.4%	0%
TERMINAL (d)	1/23 (4%)	1/32 (3%)	0/23 (0%)
FIRST INCIDENCE	676	744 (T)	---
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.192N	P=0.461N	P=0.235N
POLY 1.5	P=0.187N	P=0.478N	P=0.235N
POLY 6	P=0.199N	P=0.437N	P=0.237N
RAO-SCOTT	P=0.225N	P=0.481N	P=0.273N
LITTER C-A/FISHERS	P=0.192N	P=0.537N	P=0.262N

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Adrenal Medulla</b>			
<b>Pheochromocytoma Benign</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	1/50 (2%)	4/50 (8%)	1/50 (2%)
LITTERS (b)	1/32 (3%)	4/29 (14%)	1/30 (3%)
POLY-3 RATE (c)	1/36.81	4/41.44	1/37.45
POLY-3 PERCENT (g)	2.7%	9.7%	2.7%
TERMINAL (d)	1/23 (4%)	4/32 (13%)	0/23 (0%)
FIRST INCIDENCE	744 (T)	744 (T)	683
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.475N	P=0.216	P=0.758N
POLY 1.5	P=0.475N	P=0.198	P=0.758N
POLY 6	P=0.479N	P=0.242	P=0.758N
RAO-SCOTT	P=0.478N	P=0.231	P=0.718N
LITTER C-A/FISHERS	P=0.499N	P=0.148	P=0.738

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Adrenal Medulla</b>			
<b>Pheochromocytoma: Benign, Complex, Malignant, NOS</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	1/50 (2%)	4/50 (8%)	2/50 (4%)
LITTERS (b)	1/32 (3%)	4/29 (14%)	2/30 (7%)
POLY-3 RATE (c)	1/36.81	4/41.44	2/37.45
POLY-3 PERCENT (g)	2.7%	9.7%	5.3%
TERMINAL (d)	1/23 (4%)	4/32 (13%)	1/23 (4%)
FIRST INCIDENCE	744 (T)	744 (T)	683
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.575	P=0.216	P=0.506
POLY 1.5	P=0.574	P=0.198	P=0.504
POLY 6	P=0.573	P=0.242	P=0.507
RAO-SCOTT	P=0.544	P=0.217	P=0.473
LITTER C-A/FISHERS	P=0.547	P=0.148	P=0.475

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Islets, Pancreatic Adenoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	1/50 (2%)	1/50 (2%)	2/50 (4%)
LITTERS (b)	1/32 (3%)	1/29 (3%)	2/30 (7%)
POLY-3 RATE (c)	1/36.81	1/41.44	2/37.41
POLY-3 PERCENT (g)	2.7%	2.4%	5.4%
TERMINAL (d)	1/23 (4%)	1/32 (3%)	1/23 (4%)
FIRST INCIDENCE	744 (T)	744 (T)	695
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.393	P=0.734N	P=0.506
POLY 1.5	P=0.397	P=0.746N	P=0.504
POLY 6	P=0.387	P=0.716N	P=0.506
RAO-SCOTT	P=0.383	P=0.701N	P=0.478
LITTER C-A/FISHERS	P=0.381	P=0.729	P=0.475

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TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<hr/>			
Liver			
Hepatocellular Adenoma			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	2/50 (4%)	0/50 (0%)	3/50 (6%)
LITTERS (b)	2/32 (6%)	0/29 (0%)	3/30 (10%)
POLY-3 RATE (c)	2/36.81	0/41.44	3/37.63
POLY-3 PERCENT (g)	5.4%	0%	8%
TERMINAL (d)	2/23 (9%)	0/32 (0%)	2/23 (9%)
FIRST INCIDENCE	744 (T)	---	624
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.287	P=0.211N	P=0.510
POLY 1.5	P=0.294	P=0.223N	P=0.507
POLY 6	P=0.276	P=0.196N	P=0.512
RAO-SCOTT	P=0.322	P=0.251N	P=0.508
LITTER C-A/FISHERS	P=0.284	P=0.271N	P=0.469

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TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<hr/>			
Liver			
Hepatocellular Carcinoma			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	1/50 (2%)	0/50 (0%)	4/50 (8%)
LITTERS (b)	1/32 (3%)	0/29 (0%)	4/30 (13%)
POLY-3 RATE (c)	1/36.81	0/41.44	4/37.22
POLY-3 PERCENT (g)	2.7%	0%	10.8%
TERMINAL (d)	1/23 (4%)	0/32 (0%)	4/23 (17%)
FIRST INCIDENCE	744 (T)	---	744 (T)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.047*	P=0.476N	P=0.179
POLY 1.5	P=0.050*	P=0.487N	P=0.180
POLY 6	P=0.043*	P=0.461N	P=0.177
RAO-SCOTT	P=0.089	P=0.524N	P=0.233
LITTER C-A/FISHERS	P=0.048*	P=0.525N	P=0.158

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TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<hr/>			
Liver			
Hepatocellular Carcinoma or Hepatocellular Adenoma			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	3/50 (6%)	0/50 (0%)	6/50 (12%)
LITTERS (b)	3/32 (9%)	0/29 (0%)	6/30 (20%)
POLY-3 RATE (c)	3/36.81	0/41.44	6/37.63
POLY-3 PERCENT (g)	8.2%	0%	15.9%
TERMINAL (d)	3/23 (13%)	0/32 (0%)	5/23 (22%)
FIRST INCIDENCE	744 (T)	---	624
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.064	P=0.098N	P=0.249
POLY 1.5	P=0.068	P=0.107N	P=0.247
POLY 6	P=0.057	P=0.087N	P=0.249
RAO-SCOTT	P=0.093	P=0.126N	P=0.269
LITTER C-A/FISHERS	P=0.064	P=0.138N	P=0.205

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TERMINAL SACRIFICE AT 107 WEEKS**

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DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<hr/>			
Liver			
Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	3/50 (6%)	0/50 (0%)	6/50 (12%)
LITTERS (b)	3/32 (9%)	0/29 (0%)	6/30 (20%)
POLY-3 RATE (c)	3/36.81	0/41.44	6/37.63
POLY-3 PERCENT (g)	8.2%	0%	15.9%
TERMINAL (d)	3/23 (13%)	0/32 (0%)	5/23 (22%)
FIRST INCIDENCE	744 (T)	---	624
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.064	P=0.098N	P=0.249
POLY 1.5	P=0.068	P=0.107N	P=0.247
POLY 6	P=0.057	P=0.087N	P=0.249
RAO-SCOTT	P=0.093	P=0.126N	P=0.269
LITTER C-A/FISHERS	P=0.064	P=0.138N	P=0.205

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Mammary Gland Carcinoma</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	3/50 (6%)	5/50 (10%)	4/50 (8%)
LITTERS (b)	3/32 (9%)	4/29 (14%)	4/30 (13%)
POLY-3 RATE (c)	3/37.73	5/43.37	4/37.85
POLY-3 PERCENT (g)	8%	11.5%	10.6%
TERMINAL (d)	2/23 (9%)	1/32 (3%)	2/23 (9%)
FIRST INCIDENCE	323	351	638
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.501	P=0.435	P=0.502
POLY 1.5	P=0.507	P=0.399	P=0.500
POLY 6	P=0.491	P=0.486	P=0.505
RAO-SCOTT	P=0.487	P=0.433	P=0.487
LITTER C-A/FISHERS	P=0.448	P=0.443	P=0.463

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 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Mammary Gland Carcinoma or Adenoma</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	4/50 (8%)	6/50 (12%)	5/50 (10%)
LITTERS (b)	4/32 (13%)	5/29 (17%)	5/30 (17%)
POLY-3 RATE (c)	4/37.73	6/43.37	5/37.85
POLY-3 PERCENT (g)	10.6%	13.8%	13.2%
TERMINAL (d)	3/23 (13%)	2/32 (6%)	3/23 (13%)
FIRST INCIDENCE	323	351	638
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.496	P=0.459	P=0.502
POLY 1.5	P=0.503	P=0.418	P=0.500
POLY 6	P=0.484	P=0.518	P=0.506
RAO-SCOTT	P=0.480	P=0.449	P=0.482
LITTER C-A/FISHERS	P=0.446	P=0.435	P=0.457

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Mammary Gland Fibroadenoma</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	21/50 (42%)	27/50 (54%)	12/50 (24%)
LITTERS (b)	17/32 (53%)	20/29 (69%)	11/30 (37%)
POLY-3 RATE (c)	21/41.36	27/45.18	12/40.11
POLY-3 PERCENT (g)	50.8%	59.8%	29.9%
TERMINAL (d)	10/23 (44%)	17/32 (53%)	3/23 (13%)
FIRST INCIDENCE	312	322	491
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.013N*	P=0.262	P=0.040N*
POLY 1.5	P=0.012N*	P=0.212	P=0.040N*
POLY 6	P=0.016N*	P=0.333	P=0.041N*
RAO-SCOTT	P=0.020N*	P=0.274	P=0.052N
LITTER C-A/FISHERS	P=0.063N	P=0.158	P=0.148N

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Mammary Gland Fibroma, Fibroadenoma or Adenoma</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	22/50 (44%)	27/50 (54%)	12/50 (24%)
LITTERS (b)	17/32 (53%)	20/29 (69%)	11/30 (37%)
POLY-3 RATE (c)	22/41.36	27/45.18	12/40.11
POLY-3 PERCENT (g)	53.2%	59.8%	29.9%
TERMINAL (d)	11/23 (48%)	17/32 (53%)	3/23 (13%)
FIRST INCIDENCE	312	322	491
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.008N**	P=0.342	P=0.023N*
POLY 1.5	P=0.007N**	P=0.281	P=0.024N*
POLY 6	P=0.010N**	P=0.424	P=0.024N*
RAO-SCOTT	P=0.014N*	P=0.353	P=0.036N*
LITTER C-A/FISHERS	P=0.063N	P=0.158	P=0.148N

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TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Mammary Gland</b>			
<b>Fibroma, Fibroadenoma, Carcinoma, or Adenoma</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	25/50 (50%)	31/50 (62%)	15/50 (30%)
LITTERS (b)	18/32 (56%)	22/29 (76%)	12/30 (40%)
POLY-3 RATE (c)	25/42.28	31/47.08	15/40.48
POLY-3 PERCENT (g)	59.1%	65.8%	37.1%
TERMINAL (d)	13/23 (57%)	18/32 (56%)	5/23 (22%)
FIRST INCIDENCE	312	322	491
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.010N**	P=0.328	P=0.031N*
POLY 1.5	P=0.009N**	P=0.244	P=0.031N*
POLY 6	P=0.013N*	P=0.448	P=0.030N*
RAO-SCOTT	P=0.022N*	P=0.354	P=0.054N
LITTER C-A/FISHERS	P=0.056N	P=0.090	P=0.153N



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First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Pancreas</b>			
<b>Adenoma</b>			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	0/50 (0%)	0/50 (0%)	3/50 (6%)
LITTERS (b)	0/32 (0%)	0/29 (0%)	3/30 (10%)
POLY-3 RATE (c)	0/36.81	0/41.44	3/37.48
POLY-3 PERCENT (g)	0%	0%	8%
TERMINAL (d)	0/23 (0%)	0/32 (0%)	2/23 (9%)
FIRST INCIDENCE	---	---	673
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.027*	(e)	P=0.121
POLY 1.5	P=0.028*	(e)	P=0.120
POLY 6	P=0.026*	(e)	P=0.120
RAO-SCOTT	P=0.084	(e)	P=0.215
LITTER C-A/FISHERS	P=0.028*	(e)	P=0.107

---

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Pancreas Carcinoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)
LITTERS (b)	0/32 (0%)	0/29 (0%)	2/30 (7%)
POLY-3 RATE (c)	0/36.81	0/41.44	2/37.86
POLY-3 PERCENT (g)	0%	0%	5.3%
TERMINAL (d)	0/23 (0%)	0/32 (0%)	0/23 (0%)
FIRST INCIDENCE	---	---	574
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.090	(e)	P=0.243
POLY 1.5	P=0.091	(e)	P=0.241
POLY 6	P=0.088	(e)	P=0.244
RAO-SCOTT	P=0.178	(e)	P=0.340
LITTER C-A/FISHERS	P=0.087	(e)	P=0.230

---

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Pancreas</b>			
<b>Carcinoma or Adenoma</b>			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	0/50 (0%)	0/50 (0%)	5/50 (10%)
LITTERS (b)	0/32 (0%)	0/29 (0%)	5/30 (17%)
POLY-3 RATE (c)	0/36.81	0/41.44	5/38.12
POLY-3 PERCENT (g)	0%	0%	13.1%
TERMINAL (d)	0/23 (0%)	0/32 (0%)	2/23 (9%)
FIRST INCIDENCE	---	---	574
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.003**	(e)	P=0.032*
POLY 1.5	P=0.003**	(e)	P=0.032*
POLY 6	P=0.002**	(e)	P=0.033*
RAO-SCOTT	P=0.018*	(e)	P=0.086
LITTER C-A/FISHERS	P=0.003**	(e)	P=0.022*

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Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Pituitary Gland: Pars Distalis or Unspecified Site Adenoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	22/50 (44%)	13/50 (26%)	5/50 (10%)
LITTERS (b)	17/32 (53%)	11/29 (38%)	5/30 (17%)
POLY-3 RATE (c)	22/39.54	13/42.16	5/38.28
POLY-3 PERCENT (g)	55.6%	30.8%	13.1%
TERMINAL (d)	11/23 (48%)	9/32 (28%)	2/23 (9%)
FIRST INCIDENCE	621	622	589
<b>STATISTICAL TESTS</b>			
POLY 3	P<0.001N**	P=0.017N*	P<0.001N**
POLY 1.5	P<0.001N**	P=0.025N*	P<0.001N**
POLY 6	P<0.001N**	P=0.011N*	P<0.001N**
RAO-SCOTT	P<0.001N**	P=0.023N*	P<0.001N**
LITTER C-A/FISHERS	P=0.003N**	P=0.176N	P=0.003N**

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Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Thyroid Gland: C-Cell Adenoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	9/50 (18%)	8/50 (16%)	4/50 (8%)
LITTERS (b)	9/32 (28%)	8/29 (28%)	4/30 (13%)
POLY-3 RATE (c)	9/37.78	8/41.46	4/37.82
POLY-3 PERCENT (g)	23.8%	19.3%	10.6%
TERMINAL (d)	6/23 (26%)	7/32 (22%)	2/23 (9%)
FIRST INCIDENCE	621	739	638
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.095N	P=0.414N	P=0.108N
POLY 1.5	P=0.092N	P=0.452N	P=0.110N
POLY 6	P=0.103N	P=0.364N	P=0.109N
RAO-SCOTT	P=0.089N	P=0.395N	P=0.101N
LITTER C-A/FISHERS	P=0.099N	P=0.595N	P=0.132N

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Thyroid Gland: C-Cell Carcinoma or Adenoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	9/50 (18%)	9/50 (18%)	4/50 (8%)
LITTERS (b)	9/32 (28%)	9/29 (31%)	4/30 (13%)
POLY-3 RATE (c)	9/37.78	9/41.46	4/37.82
POLY-3 PERCENT (g)	23.8%	21.7%	10.6%
TERMINAL (d)	6/23 (26%)	8/32 (25%)	2/23 (9%)
FIRST INCIDENCE	621	739	638
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.086N	P=0.518N	P=0.108N
POLY 1.5	P=0.084N	P=0.556N	P=0.110N
POLY 6	P=0.093N	P=0.465N	P=0.109N
RAO-SCOTT	P=0.080N	P=0.496N	P=0.100N
LITTER C-A/FISHERS	P=0.090N	P=0.512	P=0.132N

---

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

Time Report Requested: 11:36:29

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>Uterus Carcinoma</b>			
<b>TUMOR RATES</b>			
OVERALL (a)	0/50 (0%)	2/50 (4%)	1/50 (2%)
LITTERS (b)	0/32 (0%)	2/29 (7%)	1/30 (3%)
POLY-3 RATE (c)	0/36.81	2/42.01	1/37.22
POLY-3 PERCENT (g)	0%	4.8%	2.7%
TERMINAL (d)	0/23 (0%)	1/32 (3%)	1/23 (4%)
FIRST INCIDENCE	---	564	744 (T)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.536	P=0.267	P=0.502
POLY 1.5	P=0.534	P=0.254	P=0.502
POLY 6	P=0.535	P=0.288	P=0.501
RAO-SCOTT	P=0.512	P=0.285	P=0.477
LITTER C-A/FISHERS	P=0.514	P=0.222	P=0.484

---

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

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First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

---

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<hr/>			
Uterus			
Polyp Stromal			
<hr/>			
<b>TUMOR RATES</b>			
OVERALL (a)	6/50 (12%)	4/50 (8%)	3/50 (6%)
LITTERS (b)	5/32 (16%)	4/29 (14%)	3/30 (10%)
POLY-3 RATE (c)	6/37.44	4/41.81	3/37.63
POLY-3 PERCENT (g)	16%	9.6%	8%
TERMINAL (d)	4/23 (17%)	3/32 (9%)	2/23 (9%)
FIRST INCIDENCE	574	638	624
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.239N	P=0.300N	P=0.235N
POLY 1.5	P=0.232N	P=0.331N	P=0.237N
POLY 6	P=0.254N	P=0.259N	P=0.236N
RAO-SCOTT	P=0.255N	P=0.321N	P=0.257N
LITTER C-A/FISHERS	P=0.342N	P=0.565N	P=0.391N

---



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

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First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>All Organs</b>			
<b>Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)
LITTERS (b)	1/32 (3%)	0/29 (0%)	2/30 (7%)
POLY-3 RATE (c)	1/37.09	0/41.44	2/37.22
POLY-3 PERCENT (g)	2.7%	0%	5.4%
TERMINAL (d)	0/23 (0%)	0/32 (0%)	2/23 (9%)
FIRST INCIDENCE	667	---	744 (T)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	P=0.478N	P=0.501
POLY 1.5	P=0.309	P=0.488N	P=0.502
POLY 6	P=0.293	P=0.464N	P=0.497
RAO-SCOTT	P=0.333	P=0.500N	P=0.502
LITTER C-A/FISHERS	P=0.301	P=0.525N	P=0.475

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>All Organs</b>			
<b>Benign Tumors</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	38/50 (76%)	37/50 (74%)	27/50 (54%)
LITTERS (b)	27/32 (84%)	26/29 (90%)	22/30 (73%)
POLY-3 RATE (c)	38/43.02	37/45.69	27/41.87
POLY-3 PERCENT (g)	88.3%	81%	64.5%
TERMINAL (d)	21/23 (91%)	25/32 (78%)	13/23 (57%)
FIRST INCIDENCE	312	322	491
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.003N**	P=0.234N	P=0.004N**
POLY 1.5	P=0.004N**	P=0.338N	P=0.007N**
POLY 6	P=0.003N**	P=0.148N	P=0.004N**
RAO-SCOTT	P=0.005N**	P=0.244N	P=0.009N**
LITTER C-A/FISHERS	P=0.127N	P=0.412	P=0.225N

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 03/13/2022

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First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>All Organs</b>			
<b>Malignant Tumors</b>			
<hr/>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	12/50 (24%)	9/50 (18%)	16/50 (32%)
LITTERS (b)	9/32 (28%)	8/29 (28%)	15/30 (50%)
POLY-3 RATE (c)	12/42.06	9/44.05	16/39.00
POLY-3 PERCENT (g)	28.5%	20.4%	41%
TERMINAL (d)	4/23 (17%)	3/32 (9%)	10/23 (44%)
FIRST INCIDENCE	274	351	574
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.085	P=0.266N	P=0.167
POLY 1.5	P=0.105	P=0.292N	P=0.194
POLY 6	P=0.067	P=0.224N	P=0.143
RAO-SCOTT	P=0.090	P=0.272N	P=0.177
LITTER C-A/FISHERS	P=0.036*	P=0.595N	P=0.066

Experiment Number: 20614 - 01  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Perfluorooctanoic Acid  
 CAS Number: 335-67-1

Date Report Requested: 03/13/2022  
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 Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)  
 TERMINAL SACRIFICE AT 107 WEEKS**

DOSE	Females		
	0/0 ppm	150/300 ppm	300/1000 ppm
<b>All Organs</b>			
<b>Malignant and Benign Tumors</b>			
<b>TUMOR RATES</b>	#	#	#
OVERALL (a)	46/50 (92%)	43/50 (86%)	35/50 (70%)
LITTERS (b)	30/32 (94%)	29/29 (100%)	26/30 (87%)
POLY-3 RATE (c)	46/47.99	43/48.17	35/42.78
POLY-3 PERCENT (g)	95.9%	89.3%	81.8%
TERMINAL (d)	22/23 (96%)	27/32 (84%)	18/23 (78%)
FIRST INCIDENCE	274	322	491
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.021N*	P=0.189N	P=0.019N*
POLY 1.5	P=0.008N**	P=0.228N	P=0.009N**
POLY 6	P=0.052N	P=0.144N	P=0.040N*
RAO-SCOTT	P=0.031N*	P=0.204N	P=0.036N*
LITTER C-A/FISHERS	P=0.135N	P=0.271	P=0.305N

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**

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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 \*\*\*