

**Experiment Number:** 20614 - 01  
**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:** 07/26/2018

**Time Report Requested:** 19:56:39

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

**Lab:** BAT

Female SSACs 0-0, 0-300, 0-1000

**NTP Study Number:** C20614

**Lock Date:** 01/10/2012

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** 25017 SSAC

**Removal Date Range:** ALL

**Treatment Groups:** Include 002 0/0 ppm

Include 004 0/300 ppm

Include 008 0/1000 ppm

**Study Gender:** Both

**TDMSE Version:** 2.5.0.0\_sfh

**PWG Approval Date:** 07/25/2018

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

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

**FEMALE RATS**

**Organ**

Kidney: Papilla, Urothelium

Kidney: Renal Tubule

Liver

Liver: Hepatocyte

Ovary

Spleen

**Morphology**

Hyperplasia

Mineral

Necrosis

Pigment

Cytoplasmic Alteration

Hypertrophy

Cyst

Extramedullary Hematopoiesis

Pigment

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Blood Vessel Inflammation Chronic</b>			
<b>LESION RATES</b>			
OVERALL (a)	1/10 (10%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%
INT SACRIFICE 1	1/10 (10%)	0/10 (0%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---	---
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.421N	P=0.500N	P=0.500N
POLY 1.5	P=0.421N	P=0.500N	P=0.500N
POLY 6	P=0.421N	P=0.500N	P=0.500N
COCH-ARM / FISHERS	P=0.420N	P=0.500N	P=0.500N
MAX-ISO-POLY-3	P=0.156N	P=0.159N	P=0.159N

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Kidney			
Mineral			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	1/10 (10%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%
INT SACRIFICE 1	1/10 (10%)	0/10 (0%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---	---
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.421N	P=0.500N	P=0.500N
POLY 1.5	P=0.421N	P=0.500N	P=0.500N
POLY 6	P=0.421N	P=0.500N	P=0.500N
COCH-ARM / FISHERS	P=0.420N	P=0.500N	P=0.500N
MAX-ISO-POLY-3	P=0.156N	P=0.159N	P=0.159N

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Kidney</b>			
<b>Nephropathy Chronic Progressive</b>			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	5/10 (50%)	7/10 (70%)	6/10 (60%)
POLY-3 RATE (b)	5/10.00	7/10.00	6/10.00
POLY-3 PERCENT (g)	50%	70%	60%
INT SACRIFICE 1	5/10 (50%)	7/10 (70%)	6/10 (60%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	109 (I)	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.517	P=0.329	P=0.500
POLY 1.5	P=0.517	P=0.329	P=0.500
POLY 6	P=0.517	P=0.329	P=0.500
COCH-ARM / FISHERS	P=0.518	P=0.325	P=0.500
MAX-ISO-POLY-3	P=0.358	P=0.188	P=0.333

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Kidney: Papilla, Urothelium Hyperplasia</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	4/10 (40%)
POLY-3 RATE (b)	0/10.00	0/10.00	4/10.00
POLY-3 PERCENT (g)	0%	0%	40%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	4/10 (40%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.003**	(e)	P=0.033*
POLY 1.5	P=0.003**	(e)	P=0.033*
POLY 6	P=0.003**	(e)	P=0.033*
COCH-ARM / FISHERS	P=0.007**	(e)	P=0.043*
MAX-ISO-POLY-3	P=0.002**	(e)	P=0.007**

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Kidney: Pelvis</b>			
<b>Inflammation Chronic</b>			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Kidney: Renal Tubule Mineral</b>			
<b>LESION RATES</b>			
OVERALL (a)	2/10 (20%)	1/10 (10%)	7/10 (70%)
POLY-3 RATE (b)	2/10.00	1/10.00	7/10.00
POLY-3 PERCENT (g)	20%	10%	70%
INT SACRIFICE 1	2/10 (20%)	1/10 (10%)	7/10 (70%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	109 (I)	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.003**	P=0.500N	P=0.024*
POLY 1.5	P=0.003**	P=0.500N	P=0.024*
POLY 6	P=0.003**	P=0.500N	P=0.024*
COCH-ARM / FISHERS	P=0.008**	P=0.500N	P=0.035*
MAX-ISO-POLY-3	P=0.002**	P=0.275N	P=0.007**

---

Experiment Number: 20614 - 01  
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: 07/26/2018  
Time Report Requested: 19:56:39  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Liver</b>			
<b>Extramedullary Hematopoiesis</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Liver Inflammation Focal			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	6/10 (60%)	6/10 (60%)	8/10 (80%)
POLY-3 RATE (b)	6/10.00	6/10.00	8/10.00
POLY-3 PERCENT (g)	60%	60%	80%
INT SACRIFICE 1	6/10 (60%)	6/10 (60%)	8/10 (80%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	109 (I)	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.242	P=0.667	P=0.318
POLY 1.5	P=0.242	P=0.667	P=0.318
POLY 6	P=0.242	P=0.667	P=0.318
COCH-ARM / FISHERS	P=0.235	P=0.675N	P=0.314
MAX-ISO-POLY-3	P=0.253	P=1.000	P=0.172

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Liver Necrosis			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	2/10 (20%)
POLY-3 RATE (b)	0/10.00	0/10.00	2/10.00
POLY-3 PERCENT (g)	0%	0%	20%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	2/10 (20%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.080	(e)	P=0.227
POLY 1.5	P=0.080	(e)	P=0.227
POLY 6	P=0.080	(e)	P=0.227
COCH-ARM / FISHERS	P=0.086	(e)	P=0.237
MAX-ISO-POLY-3	P=0.046*	(e)	P=0.067

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
Liver Pigment			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	2/10 (20%)
POLY-3 RATE (b)	0/10.00	0/10.00	2/10.00
POLY-3 PERCENT (g)	0%	0%	20%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	2/10 (20%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.080	(e)	P=0.227
POLY 1.5	P=0.080	(e)	P=0.227
POLY 6	P=0.080	(e)	P=0.227
COCH-ARM / FISHERS	P=0.086	(e)	P=0.237
MAX-ISO-POLY-3	P=0.046*	(e)	P=0.067

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Liver: Bile Duct Hyperplasia</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	1/10 (10%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%	10%
INT SACRIFICE 1	0/10 (0%)	1/10 (10%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (I)	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.444	P=0.500	P=0.500
POLY 1.5	P=0.444	P=0.500	P=0.500
POLY 6	P=0.444	P=0.500	P=0.500
COCH-ARM / FISHERS	P=0.442	P=0.500	P=0.500
MAX-ISO-POLY-3	P=0.272	P=0.159	P=0.159

Experiment Number: 20614 - 01  
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: 07/26/2018  
Time Report Requested: 19:56:39  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Liver: Hepatocyte Cytoplasmic Alteration			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	0/10.00	10/10.00
POLY-3 PERCENT (g)	0%	0%	100%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	10/10 (100%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P<0.001**	(e)	P<0.001**
POLY 1.5	P<0.001**	(e)	P<0.001**
POLY 6	P<0.001**	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	P<0.001**
MAX-ISO-POLY-3	P<0.001**	(e)	(e)

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Liver: Hepatocyte Hypertrophy			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	0/10.00	10/10.00
POLY-3 PERCENT (g)	0%	0%	100%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	10/10 (100%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (l)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P<0.001**	(e)	P<0.001**
POLY 1.5	P<0.001**	(e)	P<0.001**
POLY 6	P<0.001**	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	P<0.001**
MAX-ISO-POLY-3	P<0.001**	(e)	(e)

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Liver: Hepatocyte			
Single Cell Death			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01  
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: 07/26/2018  
Time Report Requested: 19:56:39  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lung: Alveolus Infiltration Cellular Histiocyte</b>			
<b>LESION RATES</b>			
OVERALL (a)	1/10 (10%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	1/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	10%	0%	10%
INT SACRIFICE 1	1/10 (10%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.643	P=0.500N	P=0.760
POLY 1.5	P=0.643	P=0.500N	P=0.760
POLY 6	P=0.643	P=0.500N	P=0.760
COCH-ARM / FISHERS	P=0.647	P=0.500N	P=0.763N
MAX-ISO-POLY-3	P=0.460	P=0.159N	P=1.000

---

Experiment Number: 20614 - 01  
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: 07/26/2018  
Time Report Requested: 19:56:39  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lymph Node, Mandibular Atrophy</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lymph Node, Mandibular Atrophy Lymphocyte</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lymph Node, Mandibular Atrophy Lymphoid</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lymph Node, Mesenteric Atrophy Lymphocyte</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	1/10 (10%)	0/9 (0%)
POLY-3 RATE (b)	0/10.00	1/10.00	0/9.00
POLY-3 PERCENT (g)	0%	10%	0%
INT SACRIFICE 1	0/10 (0%)	1/10 (10%)	0/9 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (l)	---
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.716N	P=0.500	(e)
POLY 1.5	P=0.716N	P=0.500	(e)
POLY 6	P=0.716N	P=0.500	(e)
COCH-ARM / FISHERS	P=0.720N	P=0.500	(e)
MAX-ISO-POLY-3	P=0.383	P=0.159	(e)

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Lymph Node: Bronchial Hemorrhage</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/0 (0%)	0/0 (0%)	1/2 (50%)
POLY-3 RATE (b)	0/0.00	0/0.00	1/2.00
POLY-3 PERCENT (g)	0%	0%	50%
INT SACRIFICE 1	0/0 (0%)	0/0 (0%)	1/2 (50%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (l)
<b>STATISTICAL TESTS</b>			
POLY 3	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)
COCH-ARM / FISHERS	P=1.000N	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)

---

Experiment Number: 20614 - 01  
 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: 07/26/2018  
 Time Report Requested: 19:56:39  
 First Dose M/F: 10/27/08 / 10/28/08  
 Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
 LAST REMOVAL AT 16 WEEKS**

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
Ovary Cyst			
<b>LESION RATES</b>			
OVERALL (a)	4/10 (40%)	1/10 (10%)	0/10 (0%)
POLY-3 RATE (b)	4/10.00	1/10.00	0/10.00
POLY-3 PERCENT (g)	40%	10%	0%
INT SACRIFICE 1	4/10 (40%)	1/10 (10%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	109 (I)	---
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.029N*	P=0.148N	P=0.033N*
POLY 1.5	P=0.029N*	P=0.148N	P=0.033N*
POLY 6	P=0.029N*	P=0.148N	P=0.033N*
COCH-ARM / FISHERS	P=0.038N*	P=0.152N	P=0.043N*
MAX-ISO-POLY-3	P=0.008N**	P=0.058N	P=0.007N**

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<hr/>			
Spleen			
Extramedullary Hematopoiesis			
<hr/>			
<b>LESION RATES</b>			
OVERALL (a)	2/10 (20%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	2/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	20%	0%	0%
INT SACRIFICE 1	2/10 (20%)	0/10 (0%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---	---
<hr/>			
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.178N	P=0.227N	P=0.227N
POLY 1.5	P=0.178N	P=0.227N	P=0.227N
POLY 6	P=0.178N	P=0.227N	P=0.227N
COCH-ARM / FISHERS	P=0.183N	P=0.237N	P=0.237N
MAX-ISO-POLY-3	P=0.046N*	P=0.067N	P=0.067N

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Spleen Pigment</b>			
<b>LESION RATES</b>			
OVERALL (a)	10/10 (100%)	7/10 (70%)	10/10 (100%)
POLY-3 RATE (b)	10/10.00	7/10.00	10/10.00
POLY-3 PERCENT (g)	100%	70%	100%
INT SACRIFICE 1	10/10 (100%)	7/10 (70%)	10/10 (100%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	109 (I)	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.469	P=0.095N	(e)
POLY 1.5	P=0.469	P=0.095N	(e)
POLY 6	P=0.469	P=0.095N	(e)
COCH-ARM / FISHERS	P=0.471	P=0.105N	(e)
MAX-ISO-POLY-3	P=0.162	P=0.025N*	(e)

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Stomach, Forestomach: Submucosa Inflammation Chronic</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	1/10 (10%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	1/10.00	0/10.00
POLY-3 PERCENT (g)	0%	10%	0%
INT SACRIFICE 1	0/10 (0%)	1/10 (10%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (l)	---
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.697N	P=0.500	(e)
POLY 1.5	P=0.697N	P=0.500	(e)
POLY 6	P=0.697N	P=0.500	(e)
COCH-ARM / FISHERS	P=0.701N	P=0.500	(e)
MAX-ISO-POLY-3	P=0.378N	P=0.159	(e)

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Thyroid Gland: Follicular Cell Hypertrophy</b>			
<b>LESION RATES</b>			
OVERALL (a)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	10%
INT SACRIFICE 1	0/10 (0%)	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	109 (I)
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.303	(e)	P=0.500
POLY 1.5	P=0.303	(e)	P=0.500
POLY 6	P=0.303	(e)	P=0.500
COCH-ARM / FISHERS	P=0.299	(e)	P=0.500
MAX-ISO-POLY-3	P=0.156	(e)	P=0.159

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)  
LAST REMOVAL AT 16 WEEKS**

---

DOSE	Females		
	0/0 ppm	0/300 ppm	0/1000 ppm
<b>Uterus: Endometrium Hyperplasia Cystic</b>			
<b>LESION RATES</b>			
OVERALL (a)	1/10 (10%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%
INT SACRIFICE 1	1/10 (10%)	0/10 (0%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---	---
<b>STATISTICAL TESTS</b>			
POLY 3	P=0.421N	P=0.500N	P=0.500N
POLY 1.5	P=0.421N	P=0.500N	P=0.500N
POLY 6	P=0.421N	P=0.500N	P=0.500N
COCH-ARM / FISHERS	P=0.420N	P=0.500N	P=0.500N
MAX-ISO-POLY-3	P=0.156N	P=0.159N	P=0.159N

---

Experiment Number: 20614 - 01

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: 07/26/2018

Time Report Requested: 19:56:39

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

Lab: BAT

**LEGEND**

- (a) Number of tumor-bearing animals/number of animals examined at site.
  - (b) 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.
  - (n) No statistics are calculated if all dose groups have fewer than two tumors.
  - (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 Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

\*\*\* END OF REPORT \*\*\*