

**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:** 20:22:23  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

Male SSACs 0-300, 300-300

**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 007 0/300 ppm                      Include 009 300/300 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

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

**MALE RATS**

**Organ**

Liver: Hepatocyte

Liver: Hepatocyte, Centrilobular

Stomach, Forestomach: Submucosa

Thyroid Gland: Follicular Cell

**Morphology**

Hypertrophy

Hypertrophy

Inflammation Chronic

Hypertrophy

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

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**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Adrenal Cortex  
Vacuolization Cytoplasmic**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	0/10 (0%)
<b>POLY-3 RATE (b)</b>	1/10.00	0/10.00
<b>POLY-3 PERCENT (g)</b>	10%	0%
<b>INT SACRIFICE 1</b>	1/10 (10%)	0/10 (0%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	---

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500N
<b>POLY 1.5</b>	P=0.500N
<b>POLY 6</b>	P=0.500N
<b>COCH-ARM / FISHERS</b>	P=0.500N
<b>MAX-ISO-POLY-3</b>	P=0.158N

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Species/Strain: RATS/HSD

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

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Kidney  
Fibrosis Focal**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	0/10 (0%)
<b>POLY-3 RATE (b)</b>	1/10.00	0/10.00
<b>POLY-3 PERCENT (g)</b>	10%	0%
<b>INT SACRIFICE 1</b>	1/10 (10%)	0/10 (0%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	---

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500N
<b>POLY 1.5</b>	P=0.500N
<b>POLY 6</b>	P=0.500N
<b>COCH-ARM / FISHERS</b>	P=0.500N
<b>MAX-ISO-POLY-3</b>	P=0.158N

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Lab: BAT

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

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Kidney**  
**Nephropathy Chronic Progressive**

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**LESION RATES**

<b>OVERALL (a)</b>	4/10 (40%)	5/10 (50%)
<b>POLY-3 RATE (b)</b>	4/10.00	5/10.00
<b>POLY-3 PERCENT (g)</b>	40%	50%
<b>INT SACRIFICE 1</b>	4/10 (40%)	5/10 (50%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500
<b>POLY 1.5</b>	P=0.500
<b>POLY 6</b>	P=0.500
<b>COCH-ARM / FISHERS</b>	P=0.500
<b>MAX-ISO-POLY-3</b>	P=0.332

---

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Lab: BAT

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

**Males**

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DOSE	0/300 ppm	300/300 ppm
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**Kidney: Renal Tubule  
Dilation**

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**LESION RATES**

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
INT SACRIFICE 1	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (l)

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**STATISTICAL TESTS**

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

---

Experiment Number: 20614 - 01

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Route: DOSED FEED

Species/Strain: RATS/HSD

**P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS**

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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**

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Kidney: Renal Tubule  
Mineral**

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**LESION RATES**

<b>OVERALL (a)</b>	5/10 (50%)	6/10 (60%)
<b>POLY-3 RATE (b)</b>	5/10.00	6/10.00
<b>POLY-3 PERCENT (g)</b>	50%	60%
<b>INT SACRIFICE 1</b>	5/10 (50%)	6/10 (60%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500
<b>POLY 1.5</b>	P=0.500
<b>POLY 6</b>	P=0.500
<b>COCH-ARM / FISHERS</b>	P=0.500
<b>MAX-ISO-POLY-3</b>	P=0.332

---

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Route: DOSED FEED

Species/Strain: RATS/HSD

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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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver  
Clear Cell Focus

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**LESION RATES**

<b>OVERALL (a)</b>	0/10 (0%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	0/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	0%	20%
<b>INT SACRIFICE 1</b>	0/10 (0%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	---	109 (l)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.227
<b>POLY 1.5</b>	P=0.227
<b>POLY 6</b>	P=0.227
<b>COCH-ARM / FISHERS</b>	P=0.237
<b>MAX-ISO-POLY-3</b>	P=0.066

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Species/Strain: RATS/HSD

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Time Report Requested: 20:22:23

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**

---

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver  
Fibrosis Focal

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**LESION RATES**

<b>OVERALL (a)</b>	0/10 (0%)	1/10 (10%)
<b>POLY-3 RATE (b)</b>	0/10.00	1/10.00
<b>POLY-3 PERCENT (g)</b>	0%	10%
<b>INT SACRIFICE 1</b>	0/10 (0%)	1/10 (10%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	---	109 (l)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500
<b>POLY 1.5</b>	P=0.500
<b>POLY 6</b>	P=0.500
<b>COCH-ARM / FISHERS</b>	P=0.500
<b>MAX-ISO-POLY-3</b>	P=0.158

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Lab: BAT

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

---

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver  
Inflammation Focal

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**LESION RATES**

<b>OVERALL (a)</b>	8/10 (80%)	8/10 (80%)
<b>POLY-3 RATE (b)</b>	8/10.00	8/10.00
<b>POLY-3 PERCENT (g)</b>	80%	80%
<b>INT SACRIFICE 1</b>	8/10 (80%)	8/10 (80%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.702
<b>POLY 1.5</b>	P=0.702
<b>POLY 6</b>	P=0.702
<b>COCH-ARM / FISHERS</b>	P=0.709N
<b>MAX-ISO-POLY-3</b>	P=1.000

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Route: DOSED FEED

Species/Strain: RATS/HSD

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Perfluorooctanoic Acid

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Time Report Requested: 20:22:23

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**

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**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver  
Necrosis

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**LESION RATES**

<b>OVERALL (a)</b>	2/10 (20%)	4/10 (40%)
<b>POLY-3 RATE (b)</b>	2/10.00	4/10.00
<b>POLY-3 PERCENT (g)</b>	20%	40%
<b>INT SACRIFICE 1</b>	2/10 (20%)	4/10 (40%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.318
<b>POLY 1.5</b>	P=0.318
<b>POLY 6</b>	P=0.318
<b>COCH-ARM / FISHERS</b>	P=0.314
<b>MAX-ISO-POLY-3</b>	P=0.172

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Species/Strain: RATS/HSD

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Perfluorooctanoic Acid

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Lab: BAT

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

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**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver  
Pigment

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**LESION RATES**

<b>OVERALL (a)</b>	10/10 (100%)	10/10 (100%)
<b>POLY-3 RATE (b)</b>	10/10.00	10/10.00
<b>POLY-3 PERCENT (g)</b>	100%	100%
<b>INT SACRIFICE 1</b>	10/10 (100%)	10/10 (100%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	(e)
<b>POLY 1.5</b>	(e)
<b>POLY 6</b>	(e)
<b>COCH-ARM / FISHERS</b>	(e)
<b>MAX-ISO-POLY-3</b>	(e)

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Experiment Number: 20614 - 01

Test Type: CHRONIC

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Species/Strain: RATS/HSD

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Lab: BAT

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

---

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Liver: Bile Duct  
Hyperplasia**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	1/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	10%	20%
<b>INT SACRIFICE 1</b>	1/10 (10%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500
<b>POLY 1.5</b>	P=0.500
<b>POLY 6</b>	P=0.500
<b>COCH-ARM / FISHERS</b>	P=0.500
<b>MAX-ISO-POLY-3</b>	P=0.274

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Route: DOSED FEED

Species/Strain: RATS/HSD

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Lab: BAT

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

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver: Hepatocyte  
Cytoplasmic Alteration

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**LESION RATES**

<b>OVERALL (a)</b>	10/10 (100%)	10/10 (100%)
<b>POLY-3 RATE (b)</b>	10/10.00	10/10.00
<b>POLY-3 PERCENT (g)</b>	100%	100%
<b>INT SACRIFICE 1</b>	10/10 (100%)	10/10 (100%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	(e)
<b>POLY 1.5</b>	(e)
<b>POLY 6</b>	(e)
<b>COCH-ARM / FISHERS</b>	(e)
<b>MAX-ISO-POLY-3</b>	(e)

---

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Lab: BAT

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

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver: Hepatocyte  
Hypertrophy

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**LESION RATES**

<b>OVERALL (a)</b>	6/10 (60%)	10/10 (100%)
<b>POLY-3 RATE (b)</b>	6/10.00	10/10.00
<b>POLY-3 PERCENT (g)</b>	60%	100%
<b>INT SACRIFICE 1</b>	6/10 (60%)	10/10 (100%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.033*
<b>POLY 1.5</b>	P=0.033*
<b>POLY 6</b>	P=0.033*
<b>COCH-ARM / FISHERS</b>	P=0.043*
<b>MAX-ISO-POLY-3</b>	P=0.007**

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Perfluorooctanoic Acid

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

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Liver: Hepatocyte  
Single Cell Death

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**LESION RATES**

<b>OVERALL (a)</b>	10/10 (100%)	10/10 (100%)
<b>POLY-3 RATE (b)</b>	10/10.00	10/10.00
<b>POLY-3 PERCENT (g)</b>	100%	100%
<b>INT SACRIFICE 1</b>	10/10 (100%)	10/10 (100%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	(e)
<b>POLY 1.5</b>	(e)
<b>POLY 6</b>	(e)
<b>COCH-ARM / FISHERS</b>	(e)
<b>MAX-ISO-POLY-3</b>	(e)

---



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**P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS**

Perfluorooctanoic Acid

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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**

**Males**

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DOSE	0/300 ppm	300/300 ppm
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Liver: Hepatocyte, Centrilobular  
Hypertrophy

**LESION RATES**

OVERALL (a)	4/10 (40%)	0/10 (0%)
POLY-3 RATE (b)	4/10.00	0/10.00
POLY-3 PERCENT (g)	40%	0%
INT SACRIFICE 1	4/10 (40%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---

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**STATISTICAL TESTS**

POLY 3	P=0.033N*
POLY 1.5	P=0.033N*
POLY 6	P=0.033N*
COCH-ARM / FISHERS	P=0.043N*
MAX-ISO-POLY-3	P=0.007N**

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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: 20:22:23

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**

---

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Lung  
Inflammation Chronic**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	0/10 (0%)
<b>POLY-3 RATE (b)</b>	1/10.00	0/10.00
<b>POLY-3 PERCENT (g)</b>	10%	0%
<b>INT SACRIFICE 1</b>	1/10 (10%)	0/10 (0%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	---

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500N
<b>POLY 1.5</b>	P=0.500N
<b>POLY 6</b>	P=0.500N
<b>COCH-ARM / FISHERS</b>	P=0.500N
<b>MAX-ISO-POLY-3</b>	P=0.158N

---

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

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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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Lymph Node, Mandibular  
Atrophy**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	1/10 (10%)
<b>POLY-3 RATE (b)</b>	1/10.00	1/10.00
<b>POLY-3 PERCENT (g)</b>	10%	10%
<b>INT SACRIFICE 1</b>	1/10 (10%)	1/10 (10%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.760
<b>POLY 1.5</b>	P=0.760
<b>POLY 6</b>	P=0.760
<b>COCH-ARM / FISHERS</b>	P=0.763N
<b>MAX-ISO-POLY-3</b>	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: 20:22:23

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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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---

**Lymph Node, Mesenteric  
Atrophy**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	1/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	10%	20%
<b>INT SACRIFICE 1</b>	1/10 (10%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

---

**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500
<b>POLY 1.5</b>	P=0.500
<b>POLY 6</b>	P=0.500
<b>COCH-ARM / FISHERS</b>	P=0.500
<b>MAX-ISO-POLY-3</b>	P=0.274

---

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: 20:22:23

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**

---

**Males**

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<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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Parathyroid Gland  
Atrophy

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	0/8 (0%)
<b>POLY-3 RATE (b)</b>	1/10.00	0/8.00
<b>POLY-3 PERCENT (g)</b>	10%	0%
<b>INT SACRIFICE 1</b>	1/10 (10%)	0/8 (0%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	---

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.544N
<b>POLY 1.5</b>	P=0.544N
<b>POLY 6</b>	P=0.544N
<b>COCH-ARM / FISHERS</b>	P=0.556N
<b>MAX-ISO-POLY-3</b>	P=0.199N

---

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: 20:22:23

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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
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**Pituitary Gland  
Cyst**

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**LESION RATES**

<b>OVERALL (a)</b>	1/10 (10%)	0/10 (0%)
<b>POLY-3 RATE (b)</b>	1/10.00	0/10.00
<b>POLY-3 PERCENT (g)</b>	10%	0%
<b>INT SACRIFICE 1</b>	1/10 (10%)	0/10 (0%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	---

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500N
<b>POLY 1.5</b>	P=0.500N
<b>POLY 6</b>	P=0.500N
<b>COCH-ARM / FISHERS</b>	P=0.500N
<b>MAX-ISO-POLY-3</b>	P=0.158N

---

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: 20:22:23

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**

**Males**

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DOSE	0/300 ppm	300/300 ppm
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Prostate  
Hyperplasia

---

**LESION RATES**

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
INT SACRIFICE 1	0/10 (0%)	1/10 (10%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (l)

---

**STATISTICAL TESTS**

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

---

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: 20:22:23  
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**

---

**Males**

---

DOSE	0/300 ppm	300/300 ppm
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---

Spleen  
Extramedullary Hematopoiesis

---

**LESION RATES**

OVERALL (a)	0/10 (0%)	2/10 (20%)
POLY-3 RATE (b)	0/10.00	2/10.00
POLY-3 PERCENT (g)	0%	20%
INT SACRIFICE 1	0/10 (0%)	2/10 (20%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (I)

---

**STATISTICAL TESTS**

POLY 3	P=0.227
POLY 1.5	P=0.227
POLY 6	P=0.227
COCH-ARM / FISHERS	P=0.237
MAX-ISO-POLY-3	P=0.066

---



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: 20:22:23

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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
-------------	------------------	--------------------

---

**Spleen: Lymphoid Follicle  
Atrophy**

---

**LESION RATES**

<b>OVERALL (a)</b>	3/10 (30%)	1/10 (10%)
<b>POLY-3 RATE (b)</b>	3/10.00	1/10.00
<b>POLY-3 PERCENT (g)</b>	30%	10%
<b>INT SACRIFICE 1</b>	3/10 (30%)	1/10 (10%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

---

**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.292N
<b>POLY 1.5</b>	P=0.292N
<b>POLY 6</b>	P=0.292N
<b>COCH-ARM / FISHERS</b>	P=0.291N
<b>MAX-ISO-POLY-3</b>	P=0.136N

---

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: 20:22:23

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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
-------------	------------------	--------------------

---

**Stomach, Forestomach: Epithelium  
Hyperplasia**

---

**LESION RATES**

<b>OVERALL (a)</b>	0/10 (0%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	0/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	0%	20%
<b>INT SACRIFICE 1</b>	0/10 (0%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	---	109 (l)

---

**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.227
<b>POLY 1.5</b>	P=0.227
<b>POLY 6</b>	P=0.227
<b>COCH-ARM / FISHERS</b>	P=0.237
<b>MAX-ISO-POLY-3</b>	P=0.066

---

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: 20:22:23

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**

---

**Males**

---

DOSE	0/300 ppm	300/300 ppm
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---

Stomach, Forestomach: Submucosa  
Inflammation Chronic

---

**LESION RATES**

OVERALL (a)	0/10 (0%)	3/10 (30%)
POLY-3 RATE (b)	0/10.00	3/10.00
POLY-3 PERCENT (g)	0%	30%
INT SACRIFICE 1	0/10 (0%)	3/10 (30%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	109 (l)

---

**STATISTICAL TESTS**

POLY 3	P=0.095
POLY 1.5	P=0.095
POLY 6	P=0.095
COCH-ARM / FISHERS	P=0.105
MAX-ISO-POLY-3	P=0.025*

---

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: 20:22:23  
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**

---

**Males**

---

DOSE	0/300 ppm	300/300 ppm
------	-----------	-------------

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Stomach, Glandular: Epithelium  
Erosion

---

**LESION RATES**

OVERALL (a)	1/10 (10%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/10.00
POLY-3 PERCENT (g)	10%	0%
INT SACRIFICE 1	1/10 (10%)	0/10 (0%)
TERMINAL (d)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	109 (I)	---

---

**STATISTICAL TESTS**

POLY 3	P=0.500N
POLY 1.5	P=0.500N
POLY 6	P=0.500N
COCH-ARM / FISHERS	P=0.500N
MAX-ISO-POLY-3	P=0.158N

---

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

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Time Report Requested: 20:22:23

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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
-------------	------------------	--------------------

---

**Stomach, Glandular: Submucosa  
Inflammation Chronic**

---

**LESION RATES**

<b>OVERALL (a)</b>	5/10 (50%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	5/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	50%	20%
<b>INT SACRIFICE 1</b>	5/10 (50%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.174N
<b>POLY 1.5</b>	P=0.174N
<b>POLY 6</b>	P=0.174N
<b>COCH-ARM / FISHERS</b>	P=0.175N
<b>MAX-ISO-POLY-3</b>	P=0.079N

---

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

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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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
-------------	------------------	--------------------

---

Thymus  
Atrophy

---

**LESION RATES**

<b>OVERALL (a)</b>	3/10 (30%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	3/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	30%	20%
<b>INT SACRIFICE 1</b>	3/10 (30%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

---

**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.500N
<b>POLY 1.5</b>	P=0.500N
<b>POLY 6</b>	P=0.500N
<b>COCH-ARM / FISHERS</b>	P=0.500N
<b>MAX-ISO-POLY-3</b>	P=0.310N

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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

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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**

---

**Males**

---

<b>DOSE</b>	<b>0/300 ppm</b>	<b>300/300 ppm</b>
-------------	------------------	--------------------

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**Thyroid Gland: Follicular Cell  
Hypertrophy**

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**LESION RATES**

<b>OVERALL (a)</b>	6/10 (60%)	2/10 (20%)
<b>POLY-3 RATE (b)</b>	6/10.00	2/10.00
<b>POLY-3 PERCENT (g)</b>	60%	20%
<b>INT SACRIFICE 1</b>	6/10 (60%)	2/10 (20%)
<b>TERMINAL (d)</b>	0/0 (0%)	0/0 (0%)
<b>FIRST INCIDENCE</b>	109 (I)	109 (I)

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**STATISTICAL TESTS**

<b>POLY 3</b>	P=0.077N
<b>POLY 1.5</b>	P=0.077N
<b>POLY 6</b>	P=0.077N
<b>COCH-ARM / FISHERS</b>	P=0.085N
<b>MAX-ISO-POLY-3</b>	P=0.029N*

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Experiment Number: 20614 - 01

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: 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 \*\*\*