

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
Perfluorooctanoic Acid  
**CAS Number:** 335-67-1

**Date Report Requested:** 07/25/2018  
**Time Report Requested:** 12:59:28  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

Final 1\_16 Week SSAC Only

**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 ALL  
**Study Gender:** Both  
**TDMSE Version:** 3.0.2.3\_002  
**PWG Approval Date:** 07/25/2018

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000010

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | Blood Vessel             | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   |
| * Mammary Gland           | * Nose                      | * Pancreas               | * Parathyroid Gland        |
| * Pituitary Gland         | * Preputial Gland           | * Prostate               | * Salivary Glands          |
| * Seminal Vesicle         | * Skin                      | * Spleen                 | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Testes                    | * Thymus                 | * Thyroid Gland            |
| * Trachea                 | * Urinary Bladder           |                          |                            |

OBSERVATIONS

- |          |        |                |                    |
|----------|--------|----------------|--------------------|
| * Heart  |        | Cardiomyopathy | Minimal            |
| * Kidney | Pelvis | Dilation       | Minimal            |
|          |        | Nephropathy    | Chronicprogr, Mild |
| * Liver  |        | Inflammation   | Focal, Minimal     |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000015

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |              |                    |
|----------|--------------|--------------------|
| * Kidney | Nephropathy  | Chronicprogr, Mild |
| * Liver  | Inflammation | Focal, Minimal     |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000022

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Eye
* Harderian Gland	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex	Hyperplasia	Mild
* Kidney	Nephropathy	Chronicprogr, Minimal
* Liver	Inflammation	Focal, Minimal

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000023

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Eye
* Harderian Gland	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

**OBSERVATIONS**

* Adrenal Cortex	Hypertrophy	Minimal
* Kidney	Nephropathy	Chronicprogr, Mild
* Liver	Inflammation	Focal, Minimal

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000024

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |                               |                       |
|----------|-------------------------------|-----------------------|
| * Kidney | Accumulation, Hyaline Droplet | Minimal               |
|          | Nephropathy                   | Chronicprogr, Minimal |
| * Liver  | Inflammation                  | Focal, Minimal        |

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Test Type: CHRONIC

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Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 29

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000029

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Medulla           | Blood Vessel             | * Bone                     | * Bone Marrow             |
| * Brain                     | * Epididymis             | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           |
| * Nose                      | * Pancreas               | * Parathyroid Gland        | * Pituitary Gland         |
| * Preputial Gland           | * Prostate               | * Salivary Glands          | * Seminal Vesicle         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Testes                    | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           |                          |                            |                           |

**OBSERVATIONS**

- |                  |                |                       |
|------------------|----------------|-----------------------|
| * Adrenal Cortex | Hypertrophy    | Minimal               |
| * Heart          | Cardiomyopathy | Minimal               |
| * Kidney         | Nephropathy    | Chronicprogr, Minimal |
| * Liver          | Inflammation   | Focal, Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000043

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |



Experiment Number: 20614 - 01

Test Type: CHRONIC

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Species/Strain: RATS/HSD

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CAS Number: 335-67-1

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

Lab: BAT

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000044

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Adrenal Medulla
- \* Bone Marrow
- \* Brain
- \* Eye
- \* Harderian Gland
- \* Intestine Large, Colon
- \* Intestine Large, Rectum
- \* Intestine Small, Jejunum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Parathyroid Gland
- \* Prostate
- \* Salivary Glands
- \* Spleen
- \* Stomach, Forestomach
- \* Thymus
- \* Thyroid Gland
- Blood Vessel
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Liver
- \* Mammary Gland
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

OBSERVATIONS

- \* Kidney
- Nephropathy
- Chronicprogr, Minimal

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 46

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000046

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | Blood Vessel             | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   |
| * Mammary Gland           | * Nose                      | * Pancreas               | * Parathyroid Gland        |
| * Pituitary Gland         | * Preputial Gland           | * Prostate               | * Salivary Glands          |
| * Seminal Vesicle         | * Skin                      | * Spleen                 | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Testes                    | * Thymus                 | * Thyroid Gland            |
| * Trachea                 | * Urinary Bladder           |                          |                            |

**OBSERVATIONS**

- |          |                               |                    |
|----------|-------------------------------|--------------------|
| * Heart  | Cardiomyopathy                | Minimal            |
| * Kidney | Accumulation, Hyaline Droplet | Minimal            |
|          | Nephropathy                   | Chronicprogr, Mild |
| * Liver  | Inflammation                  | Focal, Minimal     |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

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

Lab: BAT

ANIMAL ID: 51

TRT#: 1

SEX: Male

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000051

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | Blood Vessel             | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Liver                     | * Lung                   | * Lymph Node, Mandibular   |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   | * Pancreas                 |
| * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thyroid Gland            |
| * Trachea                 | * Urinary Bladder           |                          |                            |

OBSERVATIONS

- |          |                |                    |
|----------|----------------|--------------------|
| * Heart  | Cardiomyopathy | Minimal            |
| * Kidney | Nephropathy    | Chronicprogr, Mild |
| * Thymus | Atrophy        | Minimal            |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 62

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000062

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                   |               |                              |                       |
|-------------------|---------------|------------------------------|-----------------------|
| * Kidney          |               | Nephropathy                  | Chronicprogr, Minimal |
| * Liver           | Hepatocyte    | Cytoplasmic Alteration       | Mild                  |
|                   |               | Extramedullary Hematopoiesis | Minimal               |
|                   | Hepatocyte    | Hypertrophy                  | Mild                  |
|                   |               | Inflammation                 | Focal, Minimal        |
|                   |               | Pigment                      | Minimal               |
|                   | Hepatocyte    | Single Cell Death            | Minimal               |
| * Pituitary Gland | Pars Distalis | Cyst                         |                       |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 73

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000073

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        |
| * Prostate                 | * Salivary Glands         | * Seminal Vesicle           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |

OBSERVATIONS

- |         |            |                        |                |
|---------|------------|------------------------|----------------|
| * Liver | Hepatocyte | Cytoplasmic Alteration | Mild           |
|         | Hepatocyte | Hypertrophy            | Mild           |
|         |            | Inflammation           | Focal, Minimal |
|         |            | Pigment                | Minimal        |
|         | Hepatocyte | Single Cell Death      | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

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Species/Strain: RATS/HSD

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Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 79

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000079

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                 |                |                        |                       |
|-----------------|----------------|------------------------|-----------------------|
| * Kidney        |                | Nephropathy            | Chronicprogr, Minimal |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Mild                  |
|                 | Hepatocyte     | Hypertrophy            | Mild                  |
|                 |                | Inflammation           | Focal, Minimal        |
|                 |                | Necrosis               | Minimal               |
|                 |                | Pigment                | Minimal               |
| * Thyroid Gland | Hepatocyte     | Single Cell Death      | Minimal               |
|                 | Follicular Cel | Hypertrophy            | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 80

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000080

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                 |                |                        |                         |
|-----------------|----------------|------------------------|-------------------------|
| * Kidney        | Renal Tubule   | Mineral                | Minimal                 |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Mild                    |
|                 | Hepatocyte     | Hypertrophy            | Minimal                 |
|                 |                | Inflammation           | Focal, Minimal          |
|                 |                | Necrosis               | Minimal                 |
|                 |                | Pigment                | Minimal                 |
|                 | Hepatocyte     | Single Cell Death      | Mild                    |
| * Lung          |                | Inflammation           | Chronic Active, Minimal |
| * Thyroid Gland | Follicular Cel | Hypertrophy            | Minimal                 |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 81

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000081

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                          |              |                        |                |
|--------------------------|--------------|------------------------|----------------|
| * Kidney                 | Renal Tubule | Mineral                | Minimal        |
| * Liver                  | Hepatocyte   | Cytoplasmic Alteration | Moderate       |
|                          | Hepatocyte   | Hypertrophy            | Moderate       |
|                          |              | Inflammation           | Focal, Minimal |
|                          |              | Necrosis               | Mild           |
|                          |              | Pigment                | Mild           |
|                          | Hepatocyte   | Single Cell Death      | Minimal        |
| * Lymph Node, Mandibular |              | Atrophy                | Minimal        |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 82

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000082

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Medulla         | Blood Vessel                | * Bone                   | * Bone Marrow              |
| * Brain                   | * Epididymis                | * Esophagus              | * Eye                      |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   |
| * Mammary Gland           | * Nose                      | * Pancreas               | * Pituitary Gland          |
| * Preputial Gland         | * Prostate                  | * Salivary Glands        | * Seminal Vesicle          |
| * Skin                    | * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       |
| * Testes                  | * Thymus                    | * Thyroid Gland          | * Trachea                  |
| * Urinary Bladder         |                             |                          |                            |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                  |              |                        |                |
|------------------|--------------|------------------------|----------------|
| * Adrenal Cortex |              | Hypertrophy            | Mild           |
| * Kidney         | Renal Tubule | Mineral                | Minimal        |
| * Liver          | Hepatocyte   | Cytoplasmic Alteration | Mild           |
|                  | Hepatocyte   | Hypertrophy            | Mild           |
|                  |              | Inflammation           | Focal, Minimal |
|                  |              | Pigment                | Minimal        |
|                  | Hepatocyte   | Single Cell Death      | Minimal        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 83

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000083

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                      |                          |  |  |
|----------------------|--------------------------|--|--|
| * Kidney             | Renal Tubule             | Mineral<br>Nephropathy   | Minimal<br>Chronicprogr, Minimal                     |
| * Liver              | Hepatocyte<br>Hepatocyte | Clear Cell Focus<br>Cytoplasmic Alteration<br>Hypertrophy<br>Inflammation<br>Necrosis<br>Pigment | Mild<br>Mild<br>Focal, Minimal<br>Minimal<br>Minimal |
| * Stomach, Glandular | Hepatocyte<br>Submucosa  | Single Cell Death<br>Inflammation  | Minimal<br>Chronic Active, Minimal                   |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 91

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000091

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                          |            |                        |                         |
|--------------------------|------------|------------------------|-------------------------|
| * Liver                  | Hepatocyte | Cytoplasmic Alteration | Mild                    |
|                          | Hepatocyte | Hypertrophy            | Mild                    |
|                          |            | Inflammation           | Focal, Minimal          |
|                          |            | Necrosis               | Minimal                 |
|                          | Hepatocyte | Single Cell Death      | Mild                    |
| * Lymph Node, Mandibular |            | Atrophy                | Minimal                 |
| * Stomach, Glandular     | Submucosa  | Inflammation           | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 111

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000111

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |         |            |                        |                     |
|---------|------------|------------------------|---------------------|
| * Liver | Hepatocyte | Cytoplasmic Alteration | Moderate            |
|         | Hepatocyte | Hypertrophy            | Moderate            |
|         |            | Pigment                | Minimal             |
|         | Hepatocyte | Single Cell Death      | Minimal             |
| * Lung  | Alveolus   | Infiltration Cellular  | Histiocyte, Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 112

TRT#: 3

SEX: Male

DAY ON TEST: 109

DOSE: 0/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000112

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Mild                  |
|          | Hepatocyte | Hypertrophy            | Mild                  |
|          |            | Inflammation           | Focal, Minimal        |
|          |            | Necrosis               | Minimal               |
|          | Hepatocyte | Single Cell Death      | Mild                  |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 121

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000121

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                   |               |                        |                |
|-------------------|---------------|------------------------|----------------|
| * Liver           | Hepatocyte    | Cytoplasmic Alteration | Mild           |
|                   | Hepatocyte    | Hypertrophy            | Mild           |
|                   |               | Inflammation           | Focal, Minimal |
|                   |               | Necrosis               | Mild           |
|                   |               | Pigment                | Minimal        |
|                   | Hepatocyte    | Single Cell Death      | Minimal        |
| * Pituitary Gland | Rathkes Cleft | Hyperplasia            | Tubular, Mild  |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 129

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000129

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Mild                  |
|          | Hepatocyte | Hypertrophy            | Minimal               |
|          |            | Pigment                | Minimal               |
|          | Hepatocyte | Single Cell Death      | Mild                  |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 136

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000136

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Moderate              |
|          | Hepatocyte | Hypertrophy            | Mild                  |
|          |            | Inflammation           | Focal, Minimal        |
|          | Hepatocyte | Single Cell Death      | Minimal               |



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 139

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000139

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                |
|----------|------------|------------------------|----------------|
| * Kidney | Pelvis     | Dilation               | Mild           |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Mild           |
|          | Hepatocyte | Hypertrophy            | Mild           |
|          |            | Inflammation           | Focal, Minimal |
|          |            | Necrosis               | Minimal        |
|          |            | Pigment                | Minimal        |
|          | Hepatocyte | Single Cell Death      | Minimal        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 140

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000140

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                      |            |                        |                         |
|----------------------|------------|------------------------|-------------------------|
| * Kidney             |            | Mineral                | Minimal                 |
|                      |            | Nephropathy            | Chronicprogr, Minimal   |
| * Liver              | Hepatocyte | Cytoplasmic Alteration | Moderate                |
|                      | Hepatocyte | Hypertrophy            | Moderate                |
|                      |            | Inflammation           | Focal, Minimal          |
|                      |            | Pigment                | Mild                    |
|                      | Hepatocyte | Single Cell Death      | Minimal                 |
| * Stomach, Glandular | Submucosa  | Inflammation           | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 147

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000147

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |          |            |                        |                         |
|----------|------------|------------------------|-------------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal   |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Mild                    |
|          | Hepatocyte | Hypertrophy            | Minimal                 |
|          |            | Inflammation           | Focal, Minimal          |
|          |            | Pigment                | Minimal                 |
|          | Hepatocyte | Single Cell Death      | Minimal                 |
| * Lung   |            | Inflammation           | Chronic Active, Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 153

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000153

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Minimal               |
|          | Hepatocyte | Hypertrophy            | Mild                  |
|          |            | Inflammation           | Focal, Minimal        |
|          |            | Pigment                | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 154

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000154

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                          |            |                        |                         |
|--------------------------|------------|------------------------|-------------------------|
| * Kidney                 |            | Nephropathy            | Chronicprogr, Minimal   |
| * Liver                  | Hepatocyte | Cytoplasmic Alteration | Mild                    |
|                          | Hepatocyte | Hypertrophy            | Mild                    |
|                          |            | Inflammation           | Focal, Minimal          |
|                          |            | Pigment                | Minimal                 |
|                          | Hepatocyte | Single Cell Death      | Minimal                 |
| * Lymph Node, Mandibular |            | Atrophy                | Minimal                 |
| * Stomach, Glandular     | Submucosa  | Inflammation           | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 161

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000161

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Pituitary Gland        |
| * Preputial Gland          | * Prostate                | * Salivary Glands           | * Seminal Vesicle        |
| * Skin                     | * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                          |            |                        |                       |
|--------------------------|------------|------------------------|-----------------------|
| * Kidney                 |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver                  | Hepatocyte | Cytoplasmic Alteration | Mild                  |
|                          | Hepatocyte | Hypertrophy            | Mild                  |
|                          |            | Inflammation           | Focal, Minimal        |
|                          |            | Pigment                | Minimal               |
|                          | Hepatocyte | Single Cell Death      | Minimal               |
| * Lymph Node, Mandibular |            | Atrophy                | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 167

TRT#: 5

SEX: Male

DAY ON TEST: 109

DOSE: 150/150 ppm

DISP: Scheduled Sacrifice

HISTO: 1000167

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |          |              |                        |                     |
|----------|--------------|------------------------|---------------------|
| * Kidney | Renal Tubule | Mineral                | Minimal             |
| * Liver  | Hepatocyte   | Cytoplasmic Alteration | Mild                |
|          | Hepatocyte   | Hypertrophy            | Mild                |
|          |              | Inflammation           | Focal, Minimal      |
|          |              | Pigment                | Mild                |
|          | Hepatocyte   | Single Cell Death      | Minimal             |
| * Lung   | Alveolus     | Infiltration Cellular  | Histiocyte, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 185

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000185

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Testes                   | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                          |                |                        |          |
|--------------------------|----------------|------------------------|----------|
| * Liver                  | Hepatocyte     | Cytoplasmic Alteration | Mild     |
|                          | Hepatocyte     | Hypertrophy            | Mild     |
|                          |                | Pigment                | Mild     |
|                          | Hepatocyte     | Single Cell Death      | Minimal  |
| * Lymph Node, Mandibular |                | Atrophy                | Mild     |
| * Lymph Node, Mesenteric |                | Atrophy                | Moderate |
| * Spleen                 | Lymph Follic   | Atrophy                | Mild     |
| * Thymus                 |                | Atrophy                | Minimal  |
| * Thyroid Gland          | Follicular Cel | Hypertrophy            | Minimal  |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 198

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000198

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mandibular    | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Stomach, Forestomach      | * Testes                 |
| * Thymus                   | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                      |                           |                        |                         |
|----------------------|---------------------------|------------------------|-------------------------|
| * Kidney             |                           | Nephropathy            | Chronicprogr, Minimal   |
| * Liver              | Hepatocyte                | Cytoplasmic Alteration | Moderate                |
|                      | Centrilobular, Hepatocyte | Hypertrophy            | Mild                    |
|                      |                           | Inflammation           | Focal, Minimal          |
|                      |                           | Pigment                | Mild                    |
|                      | Hepatocyte                | Single Cell Death      | Minimal                 |
| * Lung               |                           | Inflammation           | Chronic Active, Minimal |
| * Spleen             | Lymph Follic              | Atrophy                | Minimal                 |
| * Stomach, Glandular | Submucosa                 | Inflammation           | Chronic Active, Minimal |
| * Thyroid Gland      | Follicular Cel            | Hypertrophy            | Minimal                 |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 202

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000202

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Medulla         | Blood Vessel                | * Bone                   | * Bone Marrow              |
| * Brain                   | * Epididymis                | * Esophagus              | * Eye                      |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Kidney                    | * Lung                   | * Lymph Node, Mandibular   |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   | * Pancreas                 |
| * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thymus                   |
| * Trachea                 | * Urinary Bladder           |                          |                            |

OBSERVATIONS

- |                  |                           |                           |                |
|------------------|---------------------------|---------------------------|----------------|
| * Adrenal Cortex |                           | Vacuolization Cytoplasmic | Minimal        |
| * Liver          | Hepatocyte                | Cytoplasmic Alteration    | Moderate       |
|                  | Centrilobular, Hepatocyte | Hypertrophy               | Moderate       |
|                  |                           | Inflammation              | Focal, Minimal |
|                  |                           | Pigment                   | Mild           |
|                  | Hepatocyte                | Single Cell Death         | Minimal        |
| * Thyroid Gland  | Follicular Cel            | Hypertrophy               | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 205

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000205

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Testes                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |

OBSERVATIONS

- |                      |                                       |   |   |
|----------------------|---------------------------------------|---|---|
| * Kidney             | Renal Tubule                          | Mineral<br>Nephropathy  | Minimal<br>Chronicprogr, Minimal                          |
| * Liver              | Hepatocyte<br>Bile Duct<br>Hepatocyte | Cytoplasmic Alteration<br>Hyperplasia<br>Hypertrophy<br>Inflammation<br>Pigment | Moderate<br>Minimal<br>Moderate<br>Focal, Minimal<br>Mild |
| * Parathyroid Gland  | Hepatocyte                            | Single Cell Death<br>Atrophy  | Minimal<br>Mild   |
| * Stomach, Glandular | Submucosa                             | Inflammation  | Chronic Active, Minimal                                   |
| * Thymus             |                                       | Atrophy   | Minimal   |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 206

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000206

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        |
| * Prostate                 | * Salivary Glands         | * Seminal Vesicle           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 |
| * Thymus                   | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                 |                           |                        |          |
|-----------------|---------------------------|------------------------|----------|
| * Liver         | Hepatocyte                | Cytoplasmic Alteration | Moderate |
|                 | Centrilobular, Hepatocyte | Hypertrophy            | Moderate |
|                 |                           | Pigment                | Mild     |
|                 | Hepatocyte                | Single Cell Death      | Minimal  |
| * Thyroid Gland | Follicular Cel            | Hypertrophy            | Minimal  |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 214

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000214

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |                           |                        |                |
|----------|---------------------------|------------------------|----------------|
| * Kidney | Renal Tubule              | Mineral                | Minimal        |
| * Liver  | Hepatocyte                | Cytoplasmic Alteration | Mild           |
|          | Centrilobular, Hepatocyte | Hypertrophy            | Mild           |
|          |                           | Inflammation           | Focal, Minimal |
|          |                           | Pigment                | Mild           |
|          | Hepatocyte                | Single Cell Death      | Minimal        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 216

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000216

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Testes                  | * Trachea                   | * Urinary Bladder        |

OBSERVATIONS

- |                      |                |                        |                         |
|----------------------|----------------|------------------------|-------------------------|
| * Kidney             |                | Fibrosis               | Focal, Minimal          |
| * Liver              | Hepatocyte     | Cytoplasmic Alteration | Mild                    |
|                      | Hepatocyte     | Hypertrophy            | Mild                    |
|                      |                | Inflammation           | Focal, Minimal          |
|                      |                | Necrosis               | Minimal                 |
|                      |                | Pigment                | Mild                    |
|                      | Hepatocyte     | Single Cell Death      | Minimal                 |
| * Stomach, Glandular | Submucosa      | Inflammation           | Chronic Active, Minimal |
| * Thymus             |                | Atrophy                | Minimal                 |
| * Thyroid Gland      | Follicular Cel | Hypertrophy            | Minimal                 |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 226

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000226

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                 |                |                        |                       |
|-----------------|----------------|------------------------|-----------------------|
| * Kidney        | Renal Tubule   | Mineral                | Minimal               |
|                 |                | Nephropathy            | Chronicprogr, Minimal |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Mild                  |
|                 | Hepatocyte     | Hypertrophy            | Mild                  |
|                 |                | Inflammation           | Focal, Minimal        |
|                 |                | Necrosis               | Minimal               |
|                 |                | Pigment                | Mild                  |
| * Thyroid Gland | Hepatocyte     | Single Cell Death      | Minimal               |
|                 | Follicular Cel | Hypertrophy            | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 227

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000227

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                      |              |                        |                         |
|----------------------|--------------|------------------------|-------------------------|
| * Kidney             | Renal Tubule | Mineral                | Minimal                 |
| * Liver              | Hepatocyte   | Cytoplasmic Alteration | Moderate                |
|                      | Hepatocyte   | Hypertrophy            | Moderate                |
|                      |              | Inflammation           | Focal, Minimal          |
|                      |              | Pigment                | Mild                    |
| * Pituitary Gland    | Hepatocyte   | Single Cell Death      | Minimal                 |
| * Stomach, Glandular | Submucosa    | Cyst                   |                         |
|                      |              | Inflammation           | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 228

TRT#: 7

SEX: Male

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000228

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Stomach, Forestomach   |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                      |   |  |  |
|----------------------|---|--|--|
| * Kidney             | Renal Tubule                            | Mineral<br>Nephropathy   | Minimal<br>Chronicprogr, Minimal               |
| * Liver              | Hepatocyte<br>Hepatocyte                | Cytoplasmic Alteration<br>Hypertrophy<br>Inflammation<br>Pigment | Moderate<br>Moderate<br>Focal, Minimal<br>Mild |
| * Spleen             | Hepatocyte                              | Single Cell Death  | Minimal  |
| * Stomach, Glandular | Lymph Follic<br>Epithelium<br>Submucosa | Atrophy<br>Erosion<br>Inflammation                               | Minimal<br>Minimal<br>Chronic Active, Minimal  |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 245

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000245

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |              |                        |                       |
|----------|--------------|------------------------|-----------------------|
| * Kidney | Renal Tubule | Mineral                | Minimal               |
|          |              | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte   | Cytoplasmic Alteration | Mild                  |
|          | Hepatocyte   | Hypertrophy            | Mild                  |
|          |              | Inflammation           | Focal, Minimal        |
|          |              | Pigment                | Mild                  |
|          | Hepatocyte   | Single Cell Death      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 251

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000251

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Testes                   | * Trachea                 | * Urinary Bladder           |                          |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                      |                |                        |                         |
|----------------------|----------------|------------------------|-------------------------|
| * Kidney             | Renal Tubule   | Mineral                | Minimal                 |
| * Liver              |                | Clear Cell Focus       |                         |
|                      | Hepatocyte     | Cytoplasmic Alteration | Minimal                 |
|                      | Bile Duct      | Hyperplasia            | Minimal                 |
|                      | Hepatocyte     | Hypertrophy            | Minimal                 |
|                      |                | Inflammation           | Focal, Mild             |
|                      |                | Necrosis               | Minimal                 |
|                      |                | Pigment                | Minimal                 |
|                      | Hepatocyte     | Single Cell Death      | Minimal                 |
| * Stomach, Glandular | Submucosa      | Inflammation           | Chronic Active, Minimal |
| * Thymus             |                | Atrophy                | Minimal                 |
| * Thyroid Gland      | Follicular Cel | Hypertrophy            | Minimal                 |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 265

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000265

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Mild                  |
|          | Hepatocyte | Hypertrophy            | Minimal               |
|          |            | Inflammation           | Focal, Mild           |
|          |            | Pigment                | Mild                  |
|          | Hepatocyte | Single Cell Death      | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 267

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000267

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                 |                |                        |             |
|-----------------|----------------|------------------------|-------------|
| * Kidney        | Renal Tubule   | Mineral                | Minimal     |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Moderate    |
|                 | Hepatocyte     | Hypertrophy            | Minimal     |
|                 |                | Inflammation           | Focal, Mild |
|                 |                | Pigment                | Mild        |
|                 | Hepatocyte     | Single Cell Death      | Minimal     |
| * Prostate      |                | Hyperplasia            | Minimal     |
| * Thyroid Gland | Follicular Cel | Hypertrophy            | Minimal     |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 268

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000268

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        |
| * Prostate                 | * Salivary Glands         | * Seminal Vesicle           | * Skin                   |
| * Stomach, Glandular       | * Testes                  | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         |                             |                          |

OBSERVATIONS

- |                        |                            |                              |                         |
|------------------------|----------------------------|------------------------------|-------------------------|
| * Liver                | Hepatocyte                 | Cytoplasmic Alteration       | Moderate                |
|                        | Hepatocyte                 | Hypertrophy                  | Minimal                 |
|                        |                            | Inflammation                 | Focal, Minimal          |
|                        |                            | Necrosis                     | Marked                  |
|                        |                            | Pigment                      | Moderate                |
|                        | Hepatocyte                 | Single Cell Death            | Minimal                 |
|                        | [ Necrosis TGLs = 1 - 15 ] |                              |                         |
| * Spleen               |                            | Extramedullary Hematopoiesis | Minimal                 |
| * Stomach, Forestomach | Submucosa                  | Inflammation                 | Chronic Active, Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 277

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000277

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Testes                    | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                                   |            |                        |                |
|-----------------------------------|------------|------------------------|----------------|
| * Liver                           | Hepatocyte | Cytoplasmic Alteration | Moderate       |
|                                   | Hepatocyte | Hypertrophy            | Minimal        |
|                                   |            | Inflammation           | Focal, Minimal |
|                                   |            | Pigment                | Mild           |
|                                   | Hepatocyte | Single Cell Death      | Minimal        |
| [ Single Cell Death TGLs = 1-15 ] |            |                        |                |
| * Lymph Node, Mesenteric          |            | Atrophy                | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 278

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000278

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Stomach, Forestomach   |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                      |              |                              |                         |
|----------------------|--------------|------------------------------|-------------------------|
| * Kidney             | Renal Tubule | Dilation                     | Minimal                 |
|                      |              | Nephropathy                  | Chronicprogr, Minimal   |
| * Liver              | Hepatocyte   | Cytoplasmic Alteration       | Marked                  |
|                      | Bile Duct    | Hyperplasia                  | Minimal                 |
|                      | Hepatocyte   | Hypertrophy                  | Mild                    |
|                      |              | Inflammation                 | Focal, Minimal          |
|                      |              | Necrosis                     | Minimal                 |
|                      |              | Pigment                      | Mild                    |
| * Spleen             | Hepatocyte   | Single Cell Death            | Minimal                 |
| * Stomach, Glandular | Submucosa    | Extramedullary Hematopoiesis | Minimal                 |
|                      |              | Inflammation                 | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 279

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000279

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Pituitary Gland          | * Preputial Gland         | * Prostate                  | * Salivary Glands        |
| * Seminal Vesicle          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Testes                   | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |          |                            |                        |                       |
|----------|----------------------------|------------------------|-----------------------|
| * Kidney | Renal Tubule               | Mineral                | Minimal               |
|          |                            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte                 | Cytoplasmic Alteration | Marked                |
|          |                            | Fibrosis               | Focal, Minimal        |
|          | Hepatocyte                 | Hypertrophy            | Mild                  |
|          |                            | Necrosis               | Minimal               |
|          |                            | Pigment                | Mild                  |
|          | Hepatocyte                 | Single Cell Death      | Minimal               |
|          | [ Necrosis TGLs = 1 - 15 ] |                        |                       |
| * Spleen | Lymph Follic               | Atrophy                | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 280

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000280

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Preputial Gland           | * Prostate               |
| * Salivary Glands          | * Seminal Vesicle         | * Skin                      | * Spleen                 |
| * Stomach, Glandular       | * Testes                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          |                           |                             |                          |

OBSERVATIONS

- |                        |              |                        |                      |
|------------------------|--------------|------------------------|----------------------|
| * Kidney               | Renal Tubule | Mineral                | Minimal              |
| * Liver                | Hepatocyte   | Cytoplasmic Alteration | Moderate             |
|                        | Hepatocyte   | Hypertrophy            | Mild                 |
|                        |              | Inflammation           | Focal, Minimal       |
|                        |              | Pigment                | Mild                 |
| * Stomach, Forestomach | Hepatocyte   | Single Cell Death      | Minimal              |
|                        | Epithelium   | Hyperplasia            | Mild                 |
|                        | Submucosa    | Inflammation           | Chronic Active, Mild |
| * Thymus               |              | Atrophy                | Mild                 |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 282

TRT#: 9

SEX: Male

DAY ON TEST: 109

DOSE: 300/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000282

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Epididymis                | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Mammary Gland          |
| * Nose                     | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Preputial Gland          | * Prostate                | * Salivary Glands           | * Seminal Vesicle        |
| * Skin                     | * Spleen                  | * Stomach, Glandular        | * Testes                 |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |

OBSERVATIONS

- |                          |                          |  |  |
|--------------------------|--------------------------|--|--|
| * Kidney                 | Renal Tubule             | Mineral<br>Nephropathy   | Minimal<br>Chronicprogr, Minimal       |
| * Liver                  | Hepatocyte<br>Hepatocyte | Clear Cell Focus<br>Cytoplasmic Alteration<br>Hypertrophy<br>Pigment | Moderate<br>Moderate<br>Minimal        |
| * Lymph Node, Mandibular | Hepatocyte               | Single Cell Death  | Minimal                                |
| * Lymph Node, Mesenteric |                          | Atrophy  | Mild                                   |
| * Stomach, Forestomach   | Epithelium<br>Submucosa  | Atrophy<br>Hyperplasia<br>Inflammation                               | Mild<br>Marked<br>Chronic Active, Mild |

[ Hyperplasia TGLs = 1 - 15 ]

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 302

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000317

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 305

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000320

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |                |
|----------|--------------|----------------|
| * Liver  | Inflammation | Focal, Minimal |
| * Ovary  | Cyst         |                |
| * Spleen | Pigment      | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 308

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000323

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 312

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000327

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |          |                       |                       |
|----------|----------|-----------------------|-----------------------|
| * Kidney |          | Nephropathy           | Chronicprogr, Minimal |
| * Lung   | Alveolus | Infiltration Cellular | Histiocyte, Minimal   |
| * Spleen |          | Pigment               | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 319

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000334

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |                              |                |
|----------|------------------------------|----------------|
| * Kidney | Mineral                      | Minimal        |
| * Liver  | Inflammation                 | Focal, Minimal |
| * Spleen | Extramedullary Hematopoiesis | Minimal        |
|          | Pigment                      | Minimal        |



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 332

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000347

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

OBSERVATIONS

- |          |              |         |         |
|----------|--------------|---------|---------|
| * Kidney | Renal Tubule | Mineral | Minimal |
| * Spleen |              | Pigment | Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 334

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000349

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |          |             |              |                 |
|----------|-------------|--------------|-----------------|
| * Liver  |             | Inflammation | Focal, Minimal  |
| * Ovary  |             | Cyst         |                 |
| * Spleen |             | Pigment      | Minimal         |
| * Uterus | Endometrium | Hyperplasia  | Cystic, Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 339

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000354

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                   | * Bone Marrow              |
| * Brain                   | * Clitoral Gland            | * Esophagus              | * Eye                      |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Liver                     | * Lung                   | * Lymph Node, Mandibular   |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   | * Ovary                    |
| * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        | * Salivary Glands          |
| * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     | * Thymus                   |
| * Thyroid Gland           | * Trachea                   | * Urinary Bladder        | * Uterus                   |

OBSERVATIONS

- |  |              |              |                       |
|--|--------------|--------------|-----------------------|
| Blood Vessel   |              | Inflammation | Chronic, Minimal      |
| Note: Inflammation involves an artery branching off the aorta (B08). |              |              |                       |
| * Kidney   | Renal Tubule | Mineral      | Minimal               |
|  |              | Nephropathy  | Chronicprogr, Minimal |
| * Spleen   |              | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 341

TRT#: 2

SEX: Female

DAY ON TEST: 109

DOSE: 0/0 ppm

DISP: Scheduled Sacrifice

HISTO: 1000356

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |                              |                |
|----------|------------------------------|----------------|
| * Liver  | Inflammation                 | Focal, Minimal |
| * Ovary  | Cyst                         |                |
| * Spleen | Extramedullary Hematopoiesis | Minimal        |
|          | Pigment                      | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 346

**TRT#:** 2

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/0 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000361

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |             |                       |
|----------|-------------|-----------------------|
| * Kidney | Nephropathy | Chronicprogr, Minimal |
| * Ovary  | Cyst        |                       |
| * Spleen | Pigment     | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 361

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000376

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |                          |              |                     |
|--------------------------|--------------|---------------------|
| * Liver                  | Inflammation | Focal, Minimal      |
| * Lymph Node, Mesenteric | Atrophy      | Lymphocyte, Minimal |
| * Spleen                 | Pigment      | Minimal             |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 365

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000380

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

OBSERVATIONS

- |          |             |                       |
|----------|-------------|-----------------------|
| * Kidney | Nephropathy | Chronicprogr, Minimal |
| * Spleen | Pigment     | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 366

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000381

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

OBSERVATIONS

- |          |             |                       |
|----------|-------------|-----------------------|
| * Kidney | Nephropathy | Chronicprogr, Minimal |
| * Spleen | Pigment     | Minimal               |



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 367

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000382

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |  |  |
|----------|--------------|--|--|
| * Kidney | Renal Tubule | Mineral<br>Nephropathy<br>Inflammation<br>Cyst | Minimal<br>Chronicprogr, Minimal<br>Focal, Minimal |
| * Liver  |              |  |  |
| * Ovary  |              |  |  |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 371

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000386

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |                        |           |              |                         |
|------------------------|-----------|--------------|-------------------------|
| * Liver                |           | Inflammation | Focal, Minimal          |
| * Spleen               |           | Pigment      | Minimal                 |
| * Stomach, Forestomach | Submucosa | Inflammation | Chronic Active, Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 382

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000397

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Liver                     | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

**OBSERVATIONS**

- |          |             |                       |
|----------|-------------|-----------------------|
| * Kidney | Nephropathy | Chronicprogr, Minimal |
| * Spleen | Pigment     | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 385

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000400

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

OBSERVATIONS

- |          |           |              |                       |
|----------|-----------|--------------|-----------------------|
| * Kidney |           | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Bile Duct | Hyperplasia  | Minimal               |
|          |           | Inflammation | Focal, Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 405

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000420

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 406

TRT#: 4

SEX: Female

DAY ON TEST: 109

DOSE: 0/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000421

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Eye	* Harderian Gland	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 409

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 0/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000424

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 428

TRT#: 6

SEX: Female

DAY ON TEST: 109

DOSE: 150/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000443

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |                |
|----------|--------------|----------------|
| * Liver  | Inflammation | Focal, Minimal |
| * Ovary  | Cyst         |                |
| * Spleen | Pigment      | Minimal        |



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
Perfluorooctanoic Acid  
**CAS Number:** 335-67-1

**Date Report Requested:** 07/25/2018  
**Time Report Requested:** 12:59:28  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

**ANIMAL ID:** 429

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 150/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000444

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Eye	* Harderian Gland	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

**OBSERVATIONS**

* Liver	Inflammation	Focal, Minimal
* Spleen	Pigment	Minimal

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 435

TRT#: 6

SEX: Female

DAY ON TEST: 109

DOSE: 150/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000450

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Ovary  | Cyst         |                       |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 436

TRT#: 6

SEX: Female

DAY ON TEST: 109

DOSE: 150/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000451

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |
| * Uterus                   |                           |                             |                          |

**OBSERVATIONS**

- |          |              |                |
|----------|--------------|----------------|
| * Liver  | Inflammation | Focal, Minimal |
| * Spleen | Pigment      | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 442

TRT#: 6

SEX: Female

DAY ON TEST: 109

DOSE: 150/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000457

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |                               |                       |
|----------|--------------|-------------------------------|-----------------------|
| * Kidney |              | Accumulation, Hyaline Droplet | Minimal               |
|          | Renal Tubule | Mineral                       | Minimal               |
|          |              | Nephropathy                   | Chronicprogr, Minimal |
| * Liver  |              | Inflammation                  | Focal, Minimal        |
| * Spleen |              | Pigment                       | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 444

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 150/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000459

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |                          |              |                     |
|--------------------------|--------------|---------------------|
| * Liver                  | Inflammation | Focal, Minimal      |
| * Lymph Node, Mandibular | Atrophy      | Lymphocyte, Minimal |
| * Spleen                 | Pigment      | Minimal             |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 446

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 150/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000461

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                |
|----------|--------------|----------------|
| * Liver  | Inflammation | Focal, Minimal |
| * Ovary  | Cyst         |                |
| * Spleen | Pigment      | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 451

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 150/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000466

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 456

TRT#: 6

SEX: Female

DAY ON TEST: 109

DOSE: 150/300 ppm

DISP: Scheduled Sacrifice

HISTO: 1000471

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |                        |                                  |
|----------|--------------|------------------------|----------------------------------|
| * Kidney | Renal Tubule | Mineral<br>Nephropathy | Minimal<br>Chronicprogr, Minimal |
| * Liver  |              | Inflammation           | Focal, Minimal                   |
| * Spleen |              | Pigment                | Minimal                          |



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

**ANIMAL ID:** 468

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 109

**DOSE:** 150/300 ppm

**DISP:** Scheduled Sacrifice

**HISTO:** 1000483

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

**OBSERVATIONS**

- |          |              |                       |
|----------|--------------|-----------------------|
| * Kidney | Nephropathy  | Chronicprogr, Minimal |
| * Liver  | Inflammation | Focal, Minimal        |
| * Spleen | Pigment      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 491

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000506

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | Lymph Node                  | * Mammary Gland          |
| * Nose                     | * Ovary                   | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Salivary Glands         | * Skin                      | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          | * Uterus                  |                             |                          |

INSUFFICIENT TISSUE

- \* Lymph Node, Mesenteric

OBSERVATIONS

- |                          |                          |                                       |                                  |
|--------------------------|--------------------------|---------------------------------------|----------------------------------|
| * Kidney                 | Papilla, Urothelium      | Hyperplasia<br>Nephropathy            | Minimal<br>Chronicprogr, Minimal |
| * Liver                  | Hepatocyte<br>Hepatocyte | Cytoplasmic Alteration<br>Hypertrophy | Mild<br>Mild                     |
| * Lung                   | Alveolus                 | Infiltration Cellular                 | Histiocyte, Minimal              |
| * Lymph Node, Mandibular |                          | Atrophy                               | Lymphoid, Mild                   |
| * Spleen                 |                          | Pigment                               | Minimal                          |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 494

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000509

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                 |                |                        |         |
|-----------------|----------------|------------------------|---------|
| * Kidney        | Renal Tubule   | Mineral                | Minimal |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Mild    |
|                 | Hepatocyte     | Hypertrophy            | Mild    |
| * Spleen        |                | Pigment                | Minimal |
| * Thyroid Gland | Follicular Cel | Hypertrophy            | Minimal |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 499

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000514

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |                              |              |                        |                |
|------------------------------|--------------|------------------------|----------------|
| * Kidney                     | Renal Tubule | Mineral                | Minimal        |
| * Liver                      | Hepatocyte   | Cytoplasmic Alteration | Minimal        |
|                              | Bile Duct    | Hyperplasia            | Minimal        |
|                              | Hepatocyte   | Hypertrophy            | Mild           |
|                              |              | Inflammation           | Focal, Minimal |
| Lymph Node                   | Bronchial    | Hemorrhage             | Mild           |
| [ Hemorrhage TGLs = 1 - 14 ] |              |                        |                |
| * Spleen                     |              | Pigment                | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 501

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000516

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |  |                                  |
|----------|--------------|--|----------------------------------|
| * Kidney | Renal Tubule | Mineral<br>Nephropathy                                 | Minimal<br>Chronicprogr, Minimal |
| * Liver  | Hepatocyte   | Cytoplasmic Alteration<br>Extramedullary Hematopoiesis | Mild<br>Minimal                  |
|          | Hepatocyte   | Hypertrophy<br>Inflammation                            | Mild<br>Focal, Minimal           |
| * Spleen |              | Pigment  | Minimal                          |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 511

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000526

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |          |                          |  |   |
|----------|--------------------------|--|---|
| * Kidney | Renal Tubule             | Mineral<br>Nephropathy   | Minimal<br>Chronicprogr, Minimal                |
| * Liver  | Hepatocyte<br>Hepatocyte | Cytoplasmic Alteration<br>Hypertrophy<br>Inflammation<br>Pigment | Minimal<br>Minimal<br>Focal, Minimal<br>Minimal |
| * Spleen | Hepatocyte               | Single Cell Death<br>Pigment                                     | Minimal<br>Minimal                              |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 514

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000529

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                          |                     |                        |                     |
|--------------------------|---------------------|------------------------|---------------------|
| * Kidney                 | Papilla, Urothelium | Hyperplasia            | Minimal             |
|                          | Renal Tubule        | Mineral                | Minimal             |
| * Liver                  | Hepatocyte          | Cytoplasmic Alteration | Minimal             |
|                          | Hepatocyte          | Hypertrophy            | Minimal             |
|                          |                     | Inflammation           | Focal, Minimal      |
|                          |                     | Necrosis               | Minimal             |
| * Lymph Node, Mandibular |                     | Atrophy                | Lymphocyte, Minimal |
| * Spleen                 |                     | Pigment                | Minimal             |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 519

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000534

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |            |                        |                       |
|----------|------------|------------------------|-----------------------|
| * Kidney |            | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration | Minimal               |
|          | Hepatocyte | Hypertrophy            | Minimal               |
|          |            | Inflammation           | Focal, Minimal        |
| * Spleen |            | Pigment                | Minimal               |



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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
Perfluorooctanoic Acid  
CAS Number: 335-67-1

Date Report Requested: 07/25/2018  
Time Report Requested: 12:59:28  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

ANIMAL ID: 530

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000545

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Eye	* Harderian Gland	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney	Papilla, Urothelium	Hyperplasia	Minimal
* Liver	Hepatocyte	Cytoplasmic Alteration	Minimal
	Hepatocyte	Hypertrophy	Minimal
		Inflammation	Focal, Minimal
* Lymph Node, Mandibular		Atrophy	Mild
* Spleen		Pigment	Minimal

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 531

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000546

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |  |                          |   |  |
|--|--------------------------|---|--|
| * Kidney   | Renal Tubule             | Mineral<br>Nephropathy  | Minimal<br>Chronicprogr, Minimal               |
| * Liver  | Hepatocyte<br>Hepatocyte | Cytoplasmic Alteration<br>Hypertrophy<br>Inflammation<br>Necrosis | Minimal<br>Minimal<br>Focal, Minimal<br>Marked |
| Note: TGL-1 possibly due to torsion of liver lobe.<br>[ Necrosis TGLs = 1 - 14 ] |                          |   |  |
| * Spleen   |                          | Pigment   | Minimal  |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 534

TRT#: 8

SEX: Female

DAY ON TEST: 109

DOSE: 0/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000549

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |                     |                        |                       |
|----------|---------------------|------------------------|-----------------------|
| * Kidney | Papilla, Urothelium | Hyperplasia            | Mild                  |
|          | Pelvis              | Inflammation           | Chronic, Mild         |
|          | Renal Tubule        | Mineral                | Minimal               |
|          |                     | Nephropathy            | Chronicprogr, Minimal |
| * Liver  | Hepatocyte          | Cytoplasmic Alteration | Minimal               |
|          | Hepatocyte          | Hypertrophy            | Minimal               |
|          |                     | Inflammation           | Focal, Minimal        |
|          |                     | Pigment                | Minimal               |
| * Spleen |                     | Pigment                | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 541

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000556

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |            |                              |                       |
|----------|------------|------------------------------|-----------------------|
| * Kidney |            | Nephropathy                  | Chronicprogr, Minimal |
| * Liver  | Hepatocyte | Cytoplasmic Alteration       | Minimal               |
|          | Hepatocyte | Hypertrophy                  | Minimal               |
| * Spleen |            | Extramedullary Hematopoiesis | Minimal               |
|          |            | Pigment                      | Minimal               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 562

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000577

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Lung                   |
| * Lymph Node, Mandibular   | * Lymph Node, Mesenteric  | * Mammary Gland             | * Nose                   |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | * Skin                    | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |                 |                |                        |                |
|-----------------|----------------|------------------------|----------------|
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Minimal        |
|                 | Hepatocyte     | Hypertrophy            | Minimal        |
|                 |                | Inflammation           | Focal, Minimal |
|                 |                | Pigment                | Minimal        |
| * Spleen        |                | Pigment                | Minimal        |
| * Thyroid Gland | Follicular Cel | Hypertrophy            | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 565

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000580

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Mammary Gland            | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                          |                          |  |                                  |
|--------------------------|--------------------------|--|----------------------------------|
| * Kidney                 | Renal Tubule             | Mineral<br>Nephropathy                           | Minimal<br>Chronicprogr, Minimal |
| * Liver                  | Hepatocyte<br>Hepatocyte | Cytoplasmic Alteration<br>Hypertrophy<br>Pigment | Mild<br>Mild<br>Minimal          |
| * Lymph Node, Mesenteric |                          | Atrophy  | Lymphocyte, Minimal              |
| * Spleen                 |                          | Pigment  | Minimal                          |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 571

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000586

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Uterus                    |                          |

OBSERVATIONS

- |                   |                     |                        |               |
|-------------------|---------------------|------------------------|---------------|
| * Kidney          | Papilla, Urothelium | Hyperplasia            | Minimal       |
|                   | Pelvis              | Inflammation           | Chronic, Mild |
| * Liver           | Hepatocyte          | Cytoplasmic Alteration | Moderate      |
|                   | Hepatocyte          | Hypertrophy            | Moderate      |
|                   |                     | Pigment                | Minimal       |
| * Spleen          |                     | Pigment                | Minimal       |
| * Urinary Bladder |                     | Inflammation           | Mild          |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 577

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000592

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Mammary Gland            | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Trachea                |
| * Urinary Bladder          | * Uterus                  |                             |                          |

OBSERVATIONS

- |                          |                |                        |                       |
|--------------------------|----------------|------------------------|-----------------------|
| * Kidney                 |                | Nephropathy            | Chronicprogr, Minimal |
| * Liver                  | Hepatocyte     | Cytoplasmic Alteration | Mild                  |
|                          | Hepatocyte     | Hypertrophy            | Mild                  |
|                          |                | Inflammation           | Focal, Minimal        |
| * Lymph Node, Mesenteric |                | Atrophy                | Lymphocyte, Mild      |
| * Spleen                 |                | Pigment                | Minimal               |
| * Thyroid Gland          | Follicular Cel | Hypertrophy            | Minimal               |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 581

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | Blood Vessel             | * Bone                     |
| * Bone Marrow             | * Clitoral Gland            | * Esophagus              | * Eye                      |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular | * Lymph Node, Mesenteric   |
| * Mammary Gland           | * Nose                      | * Ovary                  | * Pancreas                 |
| * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        | * Skin                     |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 | * Trachea                  |
| * Urinary Bladder         | * Uterus                    |                          |                            |

OBSERVATIONS

- |                       |                     |                        |               |
|-----------------------|---------------------|------------------------|---------------|
| * Brain               | Cerebrum            | Necrosis               | Chronic, Mild |
| Note: Healed infarct. |                     |                        |               |
| * Kidney              | Papilla, Urothelium | Hyperplasia            | Minimal       |
| * Liver               | Hepatocyte          | Cytoplasmic Alteration | Mild          |
|                       | Hepatocyte          | Hypertrophy            | Mild          |
|                       |                     | Pigment                | Minimal       |
| * Spleen              |                     | Pigment                | Minimal       |
| * Thyroid Gland       |                     | Ectopic Thymus         |               |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 583

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000598

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |          |              |                        |                |
|----------|--------------|------------------------|----------------|
| * Kidney | Renal Tubule | Mineral                | Minimal        |
| * Liver  | Hepatocyte   | Cytoplasmic Alteration | Moderate       |
|          | Hepatocyte   | Hypertrophy            | Moderate       |
|          |              | Inflammation           | Focal, Minimal |
| * Spleen |              | Pigment                | Minimal        |

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 593

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000608

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Nose                    | * Ovary                     | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Trachea                |
| * Urinary Bladder          | * Uterus                  |                             |                          |

OBSERVATIONS

- |                          |                     |                        |                       |
|--------------------------|---------------------|------------------------|-----------------------|
| * Kidney                 | Papilla, Urothelium | Hyperplasia            | Minimal               |
|                          | Renal Tubule        | Mineral                | Minimal               |
|                          |                     | Nephropathy            | Chronicprogr, Minimal |
| * Liver                  | Hepatocyte          | Cytoplasmic Alteration | Mild                  |
|                          | Hepatocyte          | Hypertrophy            | Mild                  |
|                          |                     | Inflammation           | Focal, Minimal        |
|                          |                     | Pigment                | Minimal               |
| * Lymph Node, Mandibular |                     | Atrophy                | Mild                  |
| * Spleen                 |                     | Pigment                | Minimal               |
| * Thyroid Gland          | Follicular Cel      | Hypertrophy            | Minimal               |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 595

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000610

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Mammary Gland            | * Nose                    | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Salivary Glands         | * Skin                      | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          | * Uterus                  |                             |                          |

OBSERVATIONS

- |                          |                     |                        |                     |
|--------------------------|---------------------|------------------------|---------------------|
| * Kidney                 | Papilla, Urothelium | Hyperplasia            | Minimal             |
|                          | Renal Tubule        | Mineral                | Minimal             |
| * Liver                  | Hepatocyte          | Cytoplasmic Alteration | Mild                |
|                          | Hepatocyte          | Hypertrophy            | Mild                |
|                          |                     | Inflammation           | Focal, Minimal      |
|                          |                     | Pigment                | Minimal             |
| * Lymph Node, Mesenteric |                     | Atrophy                | Lymphocyte, Minimal |
| * Ovary                  |                     | Cyst                   |                     |
| * Spleen                 |                     | Pigment                | Minimal             |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:59:28

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

Lab: BAT

ANIMAL ID: 600

TRT#: 10

SEX: Female

DAY ON TEST: 109

DOSE: 300/1000 ppm

DISP: Scheduled Sacrifice

HISTO: 1000615

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | Blood Vessel                | * Bone                   |
| * Bone Marrow              | * Brain                   | * Clitoral Gland            | * Esophagus              |
| * Eye                      | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Nose                      | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |                 |                |                        |                |
|-----------------|----------------|------------------------|----------------|
| * Kidney        | Renal Tubule   | Mineral                | Mild           |
| * Liver         | Hepatocyte     | Cytoplasmic Alteration | Mild           |
|                 | Hepatocyte     | Hypertrophy            | Mild           |
|                 |                | Inflammation           | Focal, Minimal |
| * Spleen        |                | Pigment                | Minimal        |
| * Thyroid Gland | Follicular Cel | Hypertrophy            | Mild           |

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