

**Experiment Number:** 20613 - 01  
**Test Type:** 28-DAY  
**Route:** GAVAGE  
**Species/Strain:** RATS/HSD

**P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)**  
Perfluorohexanoic acid (PFHXA)  
**CAS Number:** 307-24-4

**Date Report Requested:** 02/06/2018  
**Time Report Requested:** 12:33:08  
**First Dose M/F:** 01/17/12 / 01/18/12  
**Lab:** BAT

PFHxA\_Final 1

**NTP Study Number:** C20613  
**Lock Date:** 04/25/2016  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 3.0.2.3\_002  
**PWG Approval Date:** NONE

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Harlan Sprague Dawley RATS MALE	0mg/kg/d M	62.6mg/kg/d M	125mg/kg/d M	250mg/kg/d M	500mg/kg/d M	1000mg/kg/d M
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**Disposition Summary**

<b>Animals Initially In Study</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Early Deaths</b>						
<b>Survivors</b>						
<b>Terminal Sacrifice</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>Animals Examined Microscopically</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>

## ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Suppurative, Focal						1 (10%)
Ulcer, Focal						1 (10%)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(10)	(10)	(10)	(10)	(10)
Clear Cell Focus					1 (10%)	
Hepatodiaphragmatic Nodule			1 (10%)			
Infiltration Cellular, Mixed Cell	3 (30%)	1 (10%)		2 (20%)	5 (50%)	
Hepatocyte, Cytoplasmic Alteration					2 (20%)	10 (100%)
Hepatocyte, Hypertrophy					9 (90%)	10 (100%)
Hepatocyte, Necrosis						1 (10%)
Pancreas	(10)	(10)	(10)	(10)	(10)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(0)	(10)
Epithelium, Ulcer						1 (10%)
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(0)	(10)
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a - Number of animals examined microscopically at site and number of animals with lesion

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Harlan Sprague Dawley RATS MALE	0mg/kg/d M	62.6mg/kg/d M	125mg/kg/d M	250mg/kg/d M	500mg/kg/d M	1000mg/kg/d M
Heart	(10)	(0)	(0)	(0)	(0)	(10)
Cardiomyopathy	1 (10%)					
Infiltration Cellular, Mononuclear Cell	1 (10%)					
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(7)	(0)	(0)	(0)	(0)	(8)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(10)	(10)	(10)	(10)	(10)
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Epididymis	(10)	(0)	(0)	(0)	(10)	(10)
Duct, Exfoliated Germ Cell						1 (10%)
Preputial Gland	(10)	(0)	(0)	(0)	(0)	(10)
Prostate	(10)	(0)	(0)	(0)	(0)	(10)
Seminal Vesicle	(10)	(0)	(0)	(0)	(0)	(10)
Testes	(10)	(10)	(10)	(10)	(10)	(10)
Germinal Epithelium, Atrophy			1 (10%)			
Interstitial Cell, Atrophy						1 (10%)
Seminiferous Tubule, Spermatid Retention	1 (10%)					2 (20%)
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(10)	(10)	(10)	(10)	(10)
Lymph Node	(0)	(1)	(0)	(0)	(0)	(0)
Mediastinal, Inflammation, Granulomatous		1 (100%)				

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Harlan Sprague Dawley RATS MALE	0mg/kg/d M	62.6mg/kg/d M	125mg/kg/d M	250mg/kg/d M	500mg/kg/d M	1000mg/kg/d M
Lymph Node, Mandibular	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Spleen	(10)	(10)	(10)	(10)	(10)	(10)
Increased Extramedullary Hematopoiesis					6 (60%)	10 (100%)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Skin	(10)	(0)	(0)	(0)	(0)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(0)	(10)
Fibrosis						1 (10%)
Bronchiole, Hyperplasia						1 (10%)
Bronchiole, Infiltration Cellular, Histiocyte						1 (10%)
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Olfactory Epithelium, Degeneration			1 (10%)	6 (60%)	6 (60%)	6 (60%)
Olfactory Epithelium, Hyperplasia				6 (60%)	5 (50%)	6 (60%)
Olfactory Epithelium, Inflammation, Suppurative					3 (30%)	6 (60%)
Trachea	(10)	(0)	(0)	(0)	(0)	(10)

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<hr/>						
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(0)	(10)
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URINARY SYSTEM						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Cyst					1 (10%)	
Nephropathy, Chronic Progressive	3 (30%)	8 (80%)	3 (30%)	8 (80%)	2 (20%)	6 (60%)
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)

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\*\*\* END OF MALE \*\*\*

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Harlan Sprague Dawley RATS FEMALE

0mg/kg/d F

62.6mg/kg/d F

125mg/kg/d F

250mg/kg/d F

500mg/kg/d F

1000mg/kg/d F

## Disposition Summary

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10

## ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(10)	(10)	(10)	(10)	(10)
Infiltration Cellular, Mixed Cell	1 (10%)	2 (20%)		1 (10%)		1 (10%)
Hepatocyte, Cytoplasmic Alteration						9 (90%)
Hepatocyte, Hypertrophy						9 (90%)
Pancreas	(10)	(10)	(10)	(10)	(10)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)	(10)
Epithelium, Hyperplasia						2 (20%)
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(0)	(10)
Heart	(10)	(0)	(0)	(0)	(0)	(10)

## ENDOCRINE SYSTEM

Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
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Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(8)	(0)	(0)	(0)	(0)	(7)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(10)	(10)	(10)	(10)	(10)

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GENERAL BODY SYSTEM

None

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GENITAL SYSTEM

Clitoral Gland	(10)	(0)	(0)	(0)	(0)	(10)
Ovary	(10)	(10)	(10)	(10)	(10)	(10)
Uterus	(10)	(2)	(1)	(2)	(3)	(10)
Bilateral, Dilation	1 (10%)	2 (100%)	1 (100%)	2 (100%)	3 (100%)	1 (10%)

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HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(10)	(10)	(10)	(10)	(10)
Lymph Node, Mandibular	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Spleen	(10)	(10)	(10)	(10)	(10)	(10)
Increased Extramedullary Hematopoiesis					2 (20%)	9 (90%)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)

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INTEGUMENTARY SYSTEM

Mammary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Skin	(10)	(0)	(0)	(0)	(0)	(10)

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MUSCULOSKELETAL SYSTEM

Bone	(10)	(0)	(0)	(0)	(0)	(10)
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<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(0)	(10)
Fibrosis						1 (10%)
Bronchiole, Hyperplasia						1 (10%)
Bronchiole, Infiltration Cellular, Histiocyte						1 (10%)
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Olfactory Epithelium, Degeneration		1 (10%)	3 (30%)	9 (90%)	9 (90%)	6 (60%)
Olfactory Epithelium, Hyperplasia			3 (30%)	4 (40%)	7 (70%)	3 (30%)
Olfactory Epithelium, Inflammation, Suppurative				1 (10%)	5 (50%)	8 (80%)
Trachea	(10)	(0)	(0)	(0)	(0)	(10)
<b>SPECIAL SENSES SYSTEM</b>						
Eye	(10)	(0)	(0)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(0)	(10)
<b>URINARY SYSTEM</b>						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Cyst						1 (10%)
Nephropathy, Chronic Progressive	2 (20%)	4 (40%)	4 (40%)	1 (10%)	3 (30%)	8 (80%)
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)

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

a - Number of animals examined microscopically at site and number of animals with lesion