

**Experiment Number:** 07040 - 01

**Test Type:** 28-DAY

**Route:** GAVAGE

**Species/Strain:** RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

**CAS Number:** 375-73-5

**Date Report Requested:** 02/06/2018

**Time Report Requested:** 12:38:00

**First Dose M/F:** 01/19/12 / 01/20/12

**Lab:** BAT

PFBS\_Final 1

**NTP Study Number:** C07040  
**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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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	<b>HARLAN SPRAGUE DAWLEY RATS MALE</b>	0	0	0	0	0	0	0	0	0
<b>0mg/kg/d M</b>	2	2	2	2	2	2	2	2	2	2
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Colon Infiltration Cellular	+	+	+	+	+	+	+	+	+	+	<b>10</b> <b>1 1.0</b>
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Liver Infiltration Cellular, Mixed Cell	+	+	+	+	+	+	+	+	+	+	<b>10</b> <b>2 1.0</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Salivary Glands	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
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Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 0mg/kg/d M	DAY ON TEST										ANIMAL ID			
	0	0	0	0	0	0	0	0	0	0				0
	0	0	0	0	0	0	0	0	0	0	0			
	2	2	2	2	2	2	2	2	2	2	1			
	9	9	9	9	9	9	9	9	9	9	5			
											1			
											2			
											3			
											4			
											5			
											6			
											7			
											8			
											9			
											0			
												<b>* TOTALS</b>		
Blood Vessel	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Heart	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Cardiomyopathy											1		<b>1 1.0</b>	
<b>ENDOCRINE SYSTEM</b>														
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Parathyroid Gland	M	+	M	M	+	+	+	+	+	+			<b>7</b>	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Thyroid Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
<b>GENERAL BODY SYSTEM</b>														
NONE														
<b>GENITAL SYSTEM</b>														
Epididymis	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Preputial Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>	
Prostate	+	+	+	+	+	+	+	+	+	+			<b>10</b>	

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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	* TOTALS
	0	0	0	0	0	0	0	0	0	0		
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2		
<b>MALE</b>	9	9	9	9	9	9	9	9	9	9		
<b>0mg/kg/d M</b>	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1		
	5	5	5	5	5	5	5	5	5	5		
	1	2	3	4	5	6	7	8	9	0		
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+		10
Testes	+	+	+	+	+	+	+	+	+	+		10
<b>HEMATOPOIETIC SYSTEM</b>												
Bone Marrow	+	+	+	+	+	+	+	+	+	+		10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+		10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+		10
Spleen	+	+	+	+	+	+	+	+	+	+		10
Thymus	+	+	+	+	+	+	+	+	+	+		10
<b>INTEGUMENTARY SYSTEM</b>												
Mammary Gland	+	+	+	+	+	+	+	+	+	+		10
Skin	+	+	+	+	+	+	+	+	+	+		10
<b>MUSCULOSKELETAL SYSTEM</b>												
Bone	+	+	+	+	+	+	+	+	+	+		10
<b>NERVOUS SYSTEM</b>												
Brain	+	+	+	+	+	+	+	+	+	+		10

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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	HARLAN SPRAGUE DAWLEY RATS MALE 0mg/kg/d M	ANIMAL ID	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2			0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9			1	1	1	1	1	1	1	1	
													5	5	5	5	5	5	5	6	
													1	2	3	4	5	6	7	8	
											<b>* TOTALS</b>										

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	10		
Erythrophagocytosis										1		1	1.0
Infiltration Cellular, Mononuclear Cell										1		1	1.0
Inflammation, Chronic Active										1		1	1.0
Nose	+	+	+	+	+	+	+	+	+	+	10		
Trachea	+	+	+	+	+	+	+	+	+	+	10		

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10		
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10		
Infiltration Cellular, Mononuclear Cell			2									1	2.0

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10		
Nephropathy, Chronic Progressive	1		1	1	1		1	1				6	1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10		

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	<b>HARLAN SPRAGUE DAWLEY RATS MALE</b>	0	0	0	0	0	0	0	0	0
<b>62.6mg/kg/d M</b>	2	2	2	2	2	2	2	2	2	2
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	6	6	6	6	6	6	6	6	6	7
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Hepatodiaphragmatic Nodule										1	<b>1 1.0</b>
Infiltration Cellular, Mixed Cell				1							<b>1 1.0</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Testes	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>

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Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>MALE</b> <b>62.6mg/kg/d M</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9	9	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	
		6	6	6	6	6	6	6	6	7	
		1	2	3	4	5	6	7	8	9	
											<b>* TOTALS</b>

Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Nose	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Nephropathy, Chronic Progressive		1	1				1		1		<b>4 1.0</b>

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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	HARLAN SPRAGUE DAWLEY RATS MALE 125mg/kg/d M	ANIMAL ID	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2			0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9			1	1	1	1	1	1	1	1	1	
													7	7	7	7	7	7	7	7	8	
													1	2	3	4	5	6	7	8	9	0
											<b>* TOTALS</b>											

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
Infiltration Cellular, Mixed Cell			1	1							<b>2 1.0</b>	
Hepatocyte, Cytoplasmic Alteration						1					<b>1 1.0</b>	
Hepatocyte, Hypertrophy	1	1	1	1	1	1	1	1		1	<b>9 1.0</b>	
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>	

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
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**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Testes	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
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**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
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Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
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Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>MALE</b> <b>125mg/kg/d M</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9	9	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	
		7	7	7	7	7	7	7	7	8	
		1	2	3	4	5	6	7	8	9	
											<b>* TOTALS</b>

Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Nose	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
Olfactory Epithelium, Degeneration			1		1	1					<b>3</b>	<b>1.0</b>
Olfactory Epithelium, Hyperplasia				1	1						<b>2</b>	<b>1.0</b>

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	<b>10</b>	
Nephropathy, Chronic Progressive				1	1						<b>2</b>	<b>1.0</b>

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Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 250mg/kg/d M	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9	9	9	
		0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	1	
		8	8	8	8	8	8	8	8	8	9	
		1	2	3	4	5	6	7	8	9	0	
<b>* TOTALS</b>												

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Infiltration Cellular, Mixed Cell				1	1			1			<b>3 1.0</b>
Hepatocyte, Hypertrophy	2	1	1	2	1	2	1	1	1	1	<b>10 1.3</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Adrenal Cortex										+	<b>1</b>
Adrenal Medulla										+	<b>1</b>
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Testes	+	+	+	+	+	+	+	+	+	+	<b>10</b>
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Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS MALE</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	<b>250mg/kg/d M</b>	ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2	0			0	0	0	0	0					
	9	9	9	9	9	9	9	9	9	9	1			1	1	1	1	1					
											8			8	8	8	8	8					
											1			2	3	4	5	6					
												<b>* TOTALS</b>											

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Nose	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Olfactory Epithelium, Degeneration	1	1		1	2	1	2	2				<b>7 1.4</b>	
Olfactory Epithelium, Hyperplasia	1	1			1		2	1				<b>5 1.2</b>	
Olfactory Epithelium, Inflammation, Suppurative				1				1				<b>2 1.0</b>	

**SPECIAL SENSES SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>MALE</b> <b>250mg/kg/d M</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	<b>* TOTALS</b>
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9	9	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	
		8	8	8	8	8	8	8	8	9	
		1	2	3	4	5	6	7	8	9	

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Nephropathy, Chronic Progressive	1			1	1	1	1		1		<b>6 1.0</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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1-4 .. Lesion qualified as:

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Experiment Number: 07040 - 01

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Route: GAVAGE

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	<b>HARLAN SPRAGUE DAWLEY RATS MALE</b>	0	0	0	0	0	0	0	0	0
<b>500mg/kg/d M</b>	2	2	2	2	2	2	2	2	2	2
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	2
	9	9	9	9	9	9	9	9	9	0
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Inflammation, Chronic	1										<b>1 1.0</b>
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Infiltration Cellular, Mixed Cell				1							<b>1 1.0</b>
Hepatocyte, Cytoplasmic Alteration	1	1	1	1	1	1	1	1	1	1	<b>10 1.0</b>
Hepatocyte, Hypertrophy	2	2	2	1	2	2	1	2	2	1	<b>10 1.7</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Salivary Glands	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Epithelium, Hyperplasia	1										<b>1 1.0</b>
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	<b>10</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 500mg/kg/d M	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	2	
		9	9	9	9	9	9	9	9	0	
		1	2	3	4	5	6	7	8	9	
<b>* TOTALS</b>											

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy	1										1 1.0

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
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1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
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Experiment Number: 07040 - 01

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Route: GAVAGE

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	2	2	
	9	9	9	9	9	9	9	9	9	9	
500mg/kg/d M	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	1	1	1	1	1	1	1	1	1	2	
	9	9	9	9	9	9	9	9	9	0	
	1	2	3	4	5	6	7	8	9	0	* TOTALS
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
<b>HEMATOPOIETIC SYSTEM</b>											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
<b>INTEGUMENTARY SYSTEM</b>											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
<b>MUSCULOSKELETAL SYSTEM</b>											
Bone	+	+	+	+	+	+	+	+	+	+	10
<b>NERVOUS SYSTEM</b>											

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Experiment Number: 07040 - 01

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Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	0	0	0	0	0	0	0	0	0	0			
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2			
<b>MALE</b>	9	9	9	9	9	9	9	9	9	9			
<b>500mg/kg/d M</b>	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	1	1	1	1	1	1	1	1	1	2			
	9	9	9	9	9	9	9	9	9	0			
	1	2	3	4	5	6	7	8	9	0			
											<b>* TOTALS</b>		
Brain	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>RESPIRATORY SYSTEM</b>													
Lung	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Erythrophagocytosis							1						<b>1 1.0</b>
Infiltration Cellular, Histiocyte							1						<b>1 1.0</b>
Infiltration Cellular, Mononuclear Cell			1										<b>1 1.0</b>
Alveolar Epithelium, Hyperplasia						1							<b>1 1.0</b>
Nose	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Olfactory Epithelium, Degeneration	1	2	1	2	1	2	1	1		3			<b>9 1.6</b>
Olfactory Epithelium, Hyperplasia	1	2	1	2	1	2	2	1		2			<b>9 1.6</b>
Olfactory Epithelium, Inflammation, Suppurative				1						2			<b>2 1.5</b>
Trachea	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>SPECIAL SENSES SYSTEM</b>													
Eye	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Harderian Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>URINARY SYSTEM</b>													
Kidney	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Nephropathy, Chronic Progressive			1		1		1						<b>3 1.0</b>
Urinary Bladder	+	+	+	+	+	+	+	+	+	+			<b>10</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked



Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS MALE	1	1	2	2	1	2	2	1	1
1000mg/kg/d M	5	8	5	4	8	5	1	8	7	6
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Hemorrhage										3		<b>1 3.0</b>	
Inflammation, Chronic						2						<b>1 2.0</b>	
Perforation										3		<b>1 3.0</b>	
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Hemorrhage			2									<b>1 2.0</b>	
Hepatodiaphragmatic Nodule							2					<b>1 2.0</b>	
Necrosis			3									<b>1 3.0</b>	
Hepatocyte, Cytoplasmic Alteration	2	2	1	2	1	1	2	2	1			<b>9 1.6</b>	
Hepatocyte, Hypertrophy	3	1	3	2	2	2	2	2	2			<b>9 2.1</b>	
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>		
Salivary Glands	+	+	+	+	+	+	+	+	+	+	<b>10</b>		

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID
	0	0	0	0	0	0	0	0	0	0	
<b>HARLAN SPRAGUE DAWLEY RATS</b>	1	1	2	2	1	2	2	1	1	0	
<b>MALE</b>	5	8	5	4	8	5	1	8	7	6	
<b>1000mg/kg/d M</b>	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	0	1	
	1	2	3	4	5	6	7	8	9	0	
<b>* TOTALS</b>											

Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Inflammation, Acute										1	<b>1 1.0</b>
Epithelium, Hyperplasia	1	1	1				1	1		2	<b>6 1.2</b>
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Heart	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Parathyroid Gland	+	+	M	M	+	+	M	+	+	M	<b>6</b>
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**GENERAL BODY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS MALE 1000mg/kg/d M</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		1	1	2	2	1	2	2	1	1	
		5	8	5	4	8	5	1	8	7	
		6									
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	
<b>* TOTALS</b>											

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Duct, Exfoliated Germ Cell	1	1									2 1.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
Germinal Epithelium, Degeneration							1				1 1.0

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Hypocellularity	2	2	3	3	3	3	3	2	3	2	10 2.6
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Atrophy	3		3			3	4	3			5 3.2

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 1000mg/kg/d M	DAY ON TEST										* TOTALS	
	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0		
	1	1	2	2	1	2	2	1	1	0		
	5	8	5	4	8	5	1	8	7	6		
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	2	2	2	2	2	2		
	0	0	0	0	0	0	0	0	0	1		
	1	2	3	4	5	6	7	8	9	0		
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10	
Skin	+	+	+	+	+	+	+	+	+	+	10	
<b>MUSCULOSKELETAL SYSTEM</b>												
Bone	+	+	+	+	+	+	+	+	+	+	10	
<b>NERVOUS SYSTEM</b>												
Brain	+	+	+	+	+	+	+	+	+	+	10	
<b>RESPIRATORY SYSTEM</b>												
Lung	+	+	+	+	+	+	+	+	+	+	10	
Fibrosis				2								1 2.0
Hemorrhage				2					2			2 2.0
Inflammation, Chronic Active				2								1 2.0
Alveolar Epithelium, Hyperplasia				2								1 2.0
Perivascular, Inflammation, Acute									1			1 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10	
Olfactory Epithelium, Degeneration	2	2	2	3	2	3	3		2	2		9 2.3
Olfactory Epithelium, Hyperplasia	1					1	1		2	2		5 1.4
Olfactory Epithelium, Inflammation, Suppurative	3	1	2	4	2	3	3		1	3		9 2.4
Olfactory Epithelium, Necrosis		3	1	1	3		1		3	2		7 2.0
Trachea	+	+	+	+	+	+	+	+	+	+	10	

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 1000mg/kg/d M	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	1	1	2	2	1	2	2	1	1	0	0	0	0	0	0	0	0	0
		5	8	5	4	8	5	1	8	7	6								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0								
<b>* TOTALS</b>																			

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Nephropathy, Chronic Progressive	1					1				1									3 1.0
Papilla, Necrosis	2																		1 2.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10

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

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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1-4 .. Lesion qualified as:

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0
<b>0mg/kg/d F</b>	2	2	2	2	2	2	2	2	2	2
<b>ANIMAL ID</b>	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Infiltration Cellular, Mixed Cell			1								<b>1 1.0</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Salivary Glands	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	<b>10</b>
--------------	---	---	---	---	---	---	---	---	---	---	-----------

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	0	0	0	0	0	0	0	0	0	0			
<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	2	2	2	2	2	2	2	2	2	2	0	0	
	9	9	9	9	9	9	9	9	9	9			
	1	1	1	1	1	1	1	1	1	1			
	1	2	3	4	5	6	7	8	9	0			
												<b>* TOTALS</b>	
Heart	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>ENDOCRINE SYSTEM</b>													
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Parathyroid Gland	M	+	+	+	M	M	+	+	+	+			<b>7</b>
Pituitary Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Thyroid Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>GENERAL BODY SYSTEM</b>													
NONE													
<b>GENITAL SYSTEM</b>													
Clitoral Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Ovary	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Uterus	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Vagina	+	+	+	+	+	+	+	+	+	+			<b>10</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2
	9	9	9	9	9	9	9	9	9	9
0mg/kg/d F	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Skin	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	<b>10</b>
------	---	---	---	---	---	---	---	---	---	---	-----------

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	<b>10</b>
-------	---	---	---	---	---	---	---	---	---	---	-----------

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	<b>10</b>
------	---	---	---	---	---	---	---	---	---	---	-----------

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X .. Lesion present

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2) Mild 4) Marked



Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	0	0	0	0	0	0	0	0	0	0			
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2			
<b>FEMALE</b>	9	9	9	9	9	9	9	9	9	9			
<b>0mg/kg/d F</b>	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	2	2	2	2	2	2	2	2	2	2			
	1	1	1	1	1	1	1	1	1	2			
	1	2	3	4	5	6	7	8	9	0			<b>* TOTALS</b>
Nose	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Trachea	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>SPECIAL SENSES SYSTEM</b>													
Eye	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Harderian Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>URINARY SYSTEM</b>													
Kidney	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Urinary Bladder	+	+	+	+	+	+	+	+	+	+			<b>10</b>

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+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
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1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>FEMALE</b> <b>62.6mg/kg/d F</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9		
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0		
		2	2	2	2	2	2	2	2	2	
		2	2	2	2	2	2	2	3		
		1	2	3	4	5	6	7	8	9	
<b>* TOTALS</b>											

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
---------------	---	---	---	---	---	---	---	---	---	---	-----------

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Ovary	+	+	+	+	+	+	+	+	+	+	<b>10</b>
-------	---	---	---	---	---	---	---	---	---	---	-----------

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
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1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>FEMALE</b> <b>62.6mg/kg/d F</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		9	9	9	9	9	9	9	9	9	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		2	2	2	2	2	2	2	2	3	
		1	2	3	4	5	6	7	8	9	
											<b>* TOTALS</b>

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Nose	+	+	+	+	+	+	+	+	+	+	<b>10</b>
------	---	---	---	---	---	---	---	---	---	---	-----------

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Nephropathy, Chronic Progressive					1	1		1		1	<b>4 1.0</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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Experiment Number: 07040 - 01

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Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	<b>125mg/kg/d F</b>	ANIMAL ID	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	0			0	0	0	0	0				
	9	9	9	9	9	9	9	9	9	2			2	2	2	2	2				
										3			3	3	3	3	4				
										1			2	3	4	5	6				
											<b>* TOTALS</b>										

**ALIMENTARY SYSTEM**

Liver	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Pancreas	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
---------------	---	---	---	---	---	---	---	---	---	---	-----------

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Ovary	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Uterus										+	<b>1</b>
Bilateral, Dilation										2	<b>1 2.0</b>

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS FEMALE 125mg/kg/d F</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
		1	2	3	4	5	6	7	8	9	0								

**\* TOTALS**

Thymus + + + + + + + + + +

**10**

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Nose + + + + + + + + + +

**10**

Olfactory Epithelium, Degeneration 1 1 1 1 1.0 4 1.0

Olfactory Epithelium, Inflammation, Suppurative 1 1.0 1 1.0

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

Kidney + + + + + + + + + +

**10**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0
<b>250mg/kg/d F</b>	2	2	2	2	2	2	2	2	2	2
<b>ANIMAL ID</b>	9	9	9	9	9	9	9	9	5	9
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	4	4	4	4	4	4	4	4	4	5
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

**ALIMENTARY SYSTEM**

Esophagus											+	1
Intestine Large, Cecum											+	1
Intestine Large, Colon											+	1
Intestine Large, Rectum											+	1
Intestine Small, Duodenum											+	1
Intestine Small, Ileum											+	1
Intestine Small, Jejunum											+	1
Liver	+	+	+	+	+	+	+	+	+	+		10
Infiltration Cellular, Mixed Cell						1						1 1.0
Bile Duct, Cyst			X									1
Pancreas	+	+	+	+	+	+	+	+	+	+		10
Salivary Glands											+	1
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+		10
Stomach, Glandular											+	1

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2
<b>FEMALE</b>	9	9	9	9	9	9	9	9	5	9
<b>250mg/kg/d F</b>										
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	4	4	4	4	4	4	4	4	4	5
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

Blood Vessel	+	<b>1</b>
Heart	+	<b>1</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	<b>1</b>
Adrenal Medulla	+	<b>1</b>
Islets, Pancreatic	+	<b>1</b>
Parathyroid Gland	M	<b>0</b>
Pituitary Gland	+	<b>1</b>
Thyroid Gland	+ + + + + + + + + +	<b>10</b>

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland	+	<b>1</b>
Ovary	+ + + + + + + + + +	<b>10</b>
Uterus	+	<b>1</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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Experiment Number: 07040 - 01

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Route: GAVAGE

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Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

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Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	0	0	0	0	0	0	0	0	0	0		
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2		
<b>FEMALE</b>	9	9	9	9	9	9	9	9	5	9		
<b>250mg/kg/d F</b>	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	2	2	2	2	2	2	2	2	2	2		
	4	4	4	4	4	4	4	4	4	5		
	1	2	3	4	5	6	7	8	9	0		
<b>* TOTALS</b>												

Vagina	+										<b>1</b>
--------	---	--	--	--	--	--	--	--	--	--	----------

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Lymph Node, Mandibular	+										<b>1</b>
Lymph Node, Mesenteric	+										<b>1</b>
Spleen	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thymus	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland	+										<b>1</b>
Skin	+										<b>1</b>
Hemorrhage	3										<b>1 3.0</b>

**MUSCULOSKELETAL SYSTEM**

Bone	+										<b>1</b>
------	---	--	--	--	--	--	--	--	--	--	----------

**NERVOUS SYSTEM**

Brain	+										<b>1</b>
-------	---	--	--	--	--	--	--	--	--	--	----------

**RESPIRATORY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
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BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID			
	0	0	0	0	0	0	0	0	0	0				
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	2	2	2	2				
<b>FEMALE</b>	9	9	9	9	9	9	9	9	5	9				
<b>250mg/kg/d F</b>	0	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0	0				
	2	2	2	2	2	2	2	2	2	2				
	4	4	4	4	4	4	4	4	4	5				
	1	2	3	4	5	6	7	8	9	0				
											<b>* TOTALS</b>			
Lung											+	<b>1</b>		
Nose	+	+	+	+	+	+	+	+	+	+		<b>10</b>		
Olfactory Epithelium, Degeneration	1	2	2	1	1	2	1		1	1			<b>9</b>	<b>1.3</b>
Olfactory Epithelium, Hyperplasia	1	1	1	1	1	2	1		1				<b>8</b>	<b>1.1</b>
Olfactory Epithelium, Inflammation, Suppurative									1				<b>1</b>	<b>1.0</b>
Trachea											+	<b>1</b>		
<b>SPECIAL SENSES SYSTEM</b>														
Eye											+	<b>1</b>		
Harderian Gland											+	<b>1</b>		
<b>URINARY SYSTEM</b>														
Kidney	+	+	+	+	+	+	+	+	+	+		<b>10</b>		
Nephropathy, Chronic Progressive					1		1		1				<b>3</b>	<b>1.0</b>
Urinary Bladder											+	<b>1</b>		

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
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1-4 .. Lesion qualified as:  
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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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CAS Number: 375-73-5

Date Report Requested: 02/06/2018

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First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2
500mg/kg/d F	9	9	9	9	1	9	9	9	9	9
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10	
Inflammation, Chronic							1					1 1.0
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10	
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10	
Liver	+	+	+	+	+	+	+	+	+	+	10	
Hepatocyte, Cytoplasmic Alteration	1	1	1	1		1	1	1	1	1		9 1.0
Hepatocyte, Hypertrophy	1		1	1		1	1	1	1	1		8 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10	
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Ulcer							2					1 2.0
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10	

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
<b>500mg/kg/d F</b>	ANIMAL ID	2	2	2	2	2	2	2	2	2	
		9	9	9	9	1	9	9	9	9	
		0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		2	2	2	2	2	2	2	2	2	
		5	5	5	5	5	5	5	5	6	
		1	2	3	4	5	6	7	8	9	
											<b>* TOTALS</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Heart	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	<b>9</b>
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Ovary	+	+	+	+	+	+	+	+	+	+	<b>10</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 500mg/kg/d F	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	* TOTALS
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
Uterus	29	29	29	29	21	29	29	29	29	29	29	10
Vagina	29	29	29	29	25	29	29	29	29	29	29	10
<b>HEMATOPOIETIC SYSTEM</b>												
Bone Marrow	29	29	29	29	25	29	29	29	29	29	29	10
Lymph Node, Mandibular	29	29	29	29	25	29	29	29	29	29	29	10
Lymph Node, Mesenteric	29	29	29	29	25	29	29	29	29	29	29	10
Spleen	29	29	29	29	25	29	29	29	29	29	29	10
Thymus	29	29	29	29	25	29	29	29	29	29	29	10
<b>INTEGUMENTARY SYSTEM</b>												
Mammary Gland	29	29	29	29	25	29	29	29	29	29	29	10
Skin	29	29	29	29	25	29	29	29	29	29	29	10
<b>MUSCULOSKELETAL SYSTEM</b>												
Bone	29	29	29	29	25	29	29	29	29	29	29	10
<b>NERVOUS SYSTEM</b>												
Brain	29	29	29	29	25	29	29	29	29	29	29	10

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>FEMALE</b> <b>500mg/kg/d F</b>	DAY ON TEST	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	2	2	2
		9	9	9	9	1	9	9	9	9
	ANIMAL ID	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	2	2	2
		5	5	5	5	5	5	5	5	6
		1	2	3	4	5	6	7	8	9
		0	0	0	0	0	0	0	0	0

\* TOTALS

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	10		
Erythrophagocytosis					1						1 1.0	
Inflammation, Chronic Active	1				1						2 1.0	
Nose	+	+	+	+	+	+	+	+	+	10		
Olfactory Epithelium, Degeneration	1	1	1		2	3	3	4	1	1		9 1.9
Olfactory Epithelium, Hyperplasia	1	1	1		1	2	2	3	1	1		9 1.4
Olfactory Epithelium, Inflammation, Suppurative			1		2							2 1.5
Trachea	+	+	+	+	+	+	+	+	+	10		

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	10	
Harderian Gland	+	+	+	+	+	+	+	+	+	10	

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	10	
Nephropathy, Chronic Progressive					1						1 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	10	

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

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Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 1000mg/kg/d F	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	0	0	0	0	0	0	0	0	0
		2	2	2	2	2	2	1	2	2	2		2	2	2	2	2	2	2	2	2
		7	2	0	9	9	2	6	3	1	7		6	6	6	6	6	6	6	6	7
		1	2	3	4	5	6	7	8	9	0		1	2	3	4	5	6	7	8	9
											<b>* TOTALS</b>										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10		
Inflammation, Chronic	2	1			1							3	1.3
Intestine Large, Cecum	+	+	+	+	+	+	M	+	+	+	9		
Intestine Large, Colon	+	+	+	+	+	+	M	+	+	+	9		
Intestine Large, Rectum	+	+	+	+	+	+	M	+	+	+	9		
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10		
Intestine Small, Ileum	+	+	+	+	+	+	M	+	+	+	9		
Intestine Small, Jejunum	+	+	+	+	+	+	M	+	+	+	9		
Liver	+	+	+	+	+	+	+	+	+	+	10		
Necrosis					1			1		1		3	1.0
Hepatocyte, Cytoplasmic Alteration	2	3	1	3	3	2	1	2	1	4		10	2.2
Hepatocyte, Hypertrophy	2	3	1	3	3	2	1	1	1	4		10	2.1
Pancreas	+	+	+	+	+	+	+	+	+	+	10		
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10		
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10		
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10		

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	1	2	2	2
	7	2	0	9	9	2	6	3	1	7
1000mg/kg/d F	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	2	2	2	2	2	2	2	2	2	2
	6	6	6	6	6	6	6	6	6	7
	1	2	3	4	5	6	7	8	9	0
<b>* TOTALS</b>										

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Heart	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Cardiomyopathy						1					<b>1 1.0</b>
Epicardium, Inflammation, Chronic Active					1						<b>1 1.0</b>
Myocardium, Necrosis					1						<b>1 1.0</b>

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	<b>10</b>

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland	+	+	+	+	+	+	M	+	+	+	<b>9</b>
----------------	---	---	---	---	---	---	---	---	---	---	----------

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 07040 - 01

Test Type: 28-DAY

Route: GAVAGE

Species/Strain: RATS/HSD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Perfluorobutane sulfonate (PFBS)

CAS Number: 375-73-5

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 1000mg/kg/d F	DAY ON TEST										* TOTALS
	0 2 7	0 2 2	0 2 0	0 2 9	0 2 9	0 2 2	0 2 6	0 2 3	0 2 1	0 2 7	
ANIMAL ID	0 2 6 1	0 2 6 2	0 2 6 3	0 2 6 4	0 2 6 5	0 2 6 6	0 2 6 7	0 2 6 8	0 2 6 9	0 2 7 0	
Ovary	+	+	+	+	+	+	M	+	+	+	9
Uterus	+	+	+	+	+	+	M	+	+	+	9
Vagina	+	+	+	+	+	+	M	+	+	+	9
<b>HEMATOPOIETIC SYSTEM</b>											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Hypocellularity		2	3	2	3	3	4	3	2	4	9 2.9
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Necrosis, Lymphoid									1		1 1.0
Lymph Node, Mesenteric	+	+	+	+	+	+	M	+	+	+	9
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Atrophy		2	3		3		4	3			5 3.0
Necrosis, Lymphoid					2						1 2.0
<b>INTEGUMENTARY SYSTEM</b>											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
<b>MUSCULOSKELETAL SYSTEM</b>											

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	0	0	0	0	0	0	0	0	0	0			
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	1	2	2	2			
<b>FEMALE</b>	7	2	0	9	9	2	6	3	1	7			
<b>1000mg/kg/d F</b>	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	2	2	2	2	2	2	2	2	2	2			
	6	6	6	6	6	6	6	6	6	7			
	1	2	3	4	5	6	7	8	9	0			
											<b>* TOTALS</b>		
Bone	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>NERVOUS SYSTEM</b>													
Brain	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>RESPIRATORY SYSTEM</b>													
Lung	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Erythrophagocytosis					1								<b>1 1.0</b>
Fibrosis					1								<b>1 1.0</b>
Inflammation, Chronic Active					2								<b>1 2.0</b>
Nose	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Olfactory Epithelium, Degeneration		2	2	1	2	4		2		1			<b>7 2.0</b>
Olfactory Epithelium, Hyperplasia					2			1	2	1			<b>4 1.5</b>
Olfactory Epithelium, Inflammation, Suppurative		3	2		1	3	3	3	3	2			<b>8 2.5</b>
Olfactory Epithelium, Necrosis		2	1		1		3	1	3				<b>6 1.8</b>
Trachea	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>SPECIAL SENSES SYSTEM</b>													
Eye	+	+	+	+	+	+	+	+	+	+			<b>10</b>
Harderian Gland	+	+	+	+	+	+	+	+	+	+			<b>10</b>
<b>URINARY SYSTEM</b>													
Kidney	+	+	+	+	+	+	+	+	+	+			<b>10</b>

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID			
	0	0	0	0	0	0	0	0	0	0				
<b>HARLAN SPRAGUE DAWLEY RATS</b>	2	2	2	2	2	2	1	2	2	2				
<b>FEMALE</b>	7	2	0	9	9	2	6	3	1	7				
<b>1000mg/kg/d F</b>	0	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0	0				
	2	2	2	2	2	2	2	2	2	2				
	6	6	6	6	6	6	6	6	6	7				
	1	2	3	4	5	6	7	8	9	0				
											<b>* TOTALS</b>			
Nephropathy, Chronic Progressive				1				1	1			<b>3</b>	<b>1.0</b>	
Papilla, Necrosis				2				2	1	1			<b>4</b>	<b>1.5</b>
Urinary Bladder	+	+	+	+	+	+	M	+	+	+			<b>9</b>	

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

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