Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Perfluorobutane sulfonate (PFBS)

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

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

Include ALL **Treatment Groups:** 

**Study Gender:** Both

**TDMSE Version:** 3.0.2.3\_002

**PWG Approval Date:** NONE Date Report Requested: 02/06/2018 Time Report Requested: 12:38:00 First Dose M/F: 01/19/12 / 01/20/12

Lab: BAT

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

### P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Perfluorobutane sulfonate (PFBS) **CAS Number:** 375-73-5

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

Lab: BAT

Date Report Requested: 02/06/2018

Time Report Requested: 12:38:00

## **MALE RATS**

FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 0mg/kg/d M			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			
DOSE = 62.6 mg/kg/d M			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			
DOSE = 125mg/kg/d M			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			
DOSE = 250mg/kg/d M			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			

**Test Type:** 28-DAY **Route:** GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

MALE RATS

FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 500 mg/kg/d M

TOTAL 10 UNCENSORED DEATHS 0 CENSORED DEATHS 0 TERMINAL 10

UNCENSORED DEATH DAYS

None

**CENSORED DEATH DAYS** 

None

DOSE = 1000 mg/kg/d M

TOTAL 10 UNCENSORED DEATHS 9 CENSORED DEATHS 1 TERMINAL 0

**UNCENSORED DEATH DAYS** 

15 17 18 18 18 21 24 25 25

**CENSORED DEATH DAYS** 

6

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

# MALE RATS FIRST TERMINAL SACRIFICE AT 29 DAYS

		KAP	LAN-ME	IER SUR	VIVAL P	ROBABI	LITY EST	TIMATES	i (%)	
DOSE	<u> </u>				TIME (	DAYS)				
	3	6	9	12	15	18	21	24	27	29(A)
0mg/kg/d M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
62.6mg/kg/d M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
125mg/kg/d M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
250mg/kg/d M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
500mg/kg/d M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1000mg/kg/d M	100.0	100.0	100.0	100.0	88.9	44.4	33.3	22.2	0.0	0.0

<sup>(</sup>A) FIRST TERMINAL SACRIFICE
(B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".
(C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE
(D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

### MALE RATS

FIRST TERMINAL SACRIFICE AT 29 DAYS

#### **SURVIVAL SUMMARY STATISTICS**

DOSE	0mg/kg/d M	62.6mg/kg/d M	125mg/kg/d M	250mg/kg/d M
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	100.0%	100.0%	100.0%	100.0%
SIGNIFICANCE (B) (LIFE TABLE)	P<0.001			
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	<i>.</i> (.)	<i>(</i> .)	· (.)	· (.)
MEAN LIFE SPAN (D) (STANDARD ERROR)	29.0 (0.0)	29.0 (0.0)	29.0 (0.0)	29.0 (0.0)

DOSE	500mg/kg/d M	1000mg/kg/d M
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	100.0%	0.0%
SIGNIFICANCE (B) (LIFE TABLE)		P<0.001
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	(.)	20.1 (1.3)
MEAN LIFE SPAN (D) (STANDARD ERROR)	29.0 (0.0)	18.7 (1.8)

<sup>(</sup>A) FIRST TERMINAL SACRIFICE
(B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".
(C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE
(D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

### P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Perfluorobutane sulfonate (PFBS) **CAS Number:** 375-73-5

Lab: BAT

Date Report Requested: 02/06/2018 Time Report Requested: 12:38:00 First Dose M/F: 01/19/12 / 01/20/12

## **FEMALE RATS**

FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 0mg/kg/d F			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS  None			
DOSE = 62.6mg/kg/d F			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			
DOSE = 125mg/kg/d F			
TOTAL 10	UNCENSORED DEATHS 0	CENSORED DEATHS 0	TERMINAL 10
UNCENSORED DEATH DAYS			
None			
CENSORED DEATH DAYS			
None			
DOSE = $250 \text{mg/kg/d} \text{ F}$			
TOTAL 10	UNCENSORED DEATHS 1	CENSORED DEATHS 0	TERMINAL 9
UNCENSORED DEATH DAYS			
25			
CENSORED DEATH DAYS			
None			

**Test Type:** 28-DAY **Route:** GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

**FEMALE RATS** 

FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 500 mg/kg/d F

TOTAL 10 UNCENSORED DEATHS 1

**CENSORED DEATHS 0** 

**TERMINAL 9** 

UNCENSORED DEATH DAYS

21

CENSORED DEATH DAYS

None

DOSE = 1000mg/kg/dF

TOTAL 10 UNCENSORED DEATHS 8

**CENSORED DEATHS 0** 

TERMINAL 2

**UNCENSORED DEATH DAYS** 

16 20 21 22 22 23 27 27

**CENSORED DEATH DAYS** 

None

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

## **FEMALE RATS** FIRST TERMINAL SACRIFICE AT 29 DAYS

		KAP	LAN-ME	IER SUR	VIVAL P	ROBABI	LITY EST	TIMATES	(%)	
DOSE					TIME (	DAYS)				
	3	6	9	12	15	18	21	24	27	29(A)
0mg/kg/d F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
62.6mg/kg/d F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
125mg/kg/d F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
250mg/kg/d F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	90.0	90.0
500mg/kg/d F	100.0	100.0	100.0	100.0	100.0	100.0	90.0	90.0	90.0	90.0
1000mg/kg/d F	100.0	100.0	100.0	100.0	100.0	90.0	70.0	40.0	20.0	20.0

<sup>(</sup>A) FIRST TERMINAL SACRIFICE
(B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".
(C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE
(D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 28-DAY Route: GAVAGE

Species/Strain: RATS/HSD

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

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

#### **FEMALE RATS**

FIRST TERMINAL SACRIFICE AT 29 DAYS

#### **SURVIVAL SUMMARY STATISTICS**

DOSE	0mg/kg/d F	62.6mg/kg/d F	125mg/kg/d F	250mg/kg/d F
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	100.0%	100.0%	100.0%	90.0%
SIGNIFICANCE (B) (LIFE TABLE)	P<0.001			P=1.000
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	· (.)	<i>(</i> .)	· (.)	25.0 (.)
MEAN LIFE SPAN (D) (STANDARD ERROR)	29.0 (0.0)	29.0 (0.0)	29.0 (0.0)	28.6 (0.4)

DOSE	500mg/kg/d F	1000mg/kg/d F
SURVIVAL AT END OF STUDY (KAPLAN-MEIER)	90.0%	20.0%
SIGNIFICANCE (B) (LIFE TABLE)	P=1.000	P=0.001
MEAN DAY OF NATURAL DEATHS (C) (STANDARD ERROR)	21.0 (.)	22.3 (1.3)
MEAN LIFE SPAN (D) (STANDARD ERROR)	28.2 (0.8)	23.6 (1.4)

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

<sup>(</sup>A) FIRST TERMINAL SACRIFICE
(B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".
(C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE
(D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)