Table 17

In this guide

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Table 17 Repeated dose toxicity studies for PFSAs - PFBS

*Derived by contractor; ** calculated according to EFSA. (2012); NR – not reported; NA – not applicable; # - no. of animals studied per endpoint differs to the no. of animals treated.

Substance / CAS no. / purity / reference	Strain & species / sex / no. of animals	Dose (mg/kg bw/day) / vehicle / route of admin / duration / Guideline (GL) study / Good Laboratory Practice (GLP) status	PFAS concentration (µg/mL / µg/g)	Observed effects at LOAEL (controls vs treated groups). Recovery (controls vs treated groups).	Publishe NOAEL / LOAEL (mg/kg bw/day)

PFBS (potassium salt) CAS no. Not given 98.2%. Bijland et al. (2011)	APOE*3-Leiden.CETP mice. Male, 6-8/dose.	0 or 0.03% in diet equivalent to 30. Diet (vehicle). Diet, 4-6 weeks, OECD 407, GLP not stated.	At 30 mg/kg bw/day at 4-6 weeks (mean ± SD) Serum: 32.7-37.8 ± 6.6-10.2.	Males: ↓ plasma TG (data only reported in figures). Altered gene expression related to lipolysis, fatty acid uptake and transport, fatty acid binding and activation, fatty acid oxidation and VLDL assembly. Recovery not assessed.	Males: NA / 30

PFBS (potassium salt) CAS No. 29420-49-3 98%. Chen et al. (2022)	C57BL/6 mice. Male 6/dose.	0, 10 or 500 µg/l in drinking water equivalent to 2 or 104. Drinking water (vehicle). Drinking water. 28 days. OECD 407. GLP not stated.	At 2 mg/kg bw/day (mean ± SE) Liver: 0.017 ± 0.008. At 104 mg/kg bw/day Liver: 0.027 ± 0.004.	Males: ↑ apoptosis (data only reported in figures). ↓ CAT activity (data only reported in figures). Changes in hepatic lipidome (data only reported in figures; 238 lipids changed). Recovery not assessed.	Males: 2 / 104

PFBS (potassium salt) CAS no. Not given 98.2%. Lieder et al. (2009a)	CRl:CD (SD) IGS BR VAF/PlusTM rats. Male and female 10/sex/dose.	0, 60, 200 or 600. Gavage, Carboxymethylcellulose 90 days. OECD 408 GLP study.	NR	Males: No effects on liver reported. Females: No effects on liver reported. Recovery not assessed.	Males: 600 / NA. Females: 600 / NA.

PFBS (potassium salt) CAS no. Not given 97.9%. Lieder et al. (2009b)	CRl:CD (SD) IGS BR. VAF/PlusTM rats. Male and female 30/sex/dose.	0, 30, 100, 300 or 1000 Gavage. Carboxymethylcellulose 10 weeks. OECD 416. GLP not stated.	NR	Males (mean ± SD): ↑ absolute liver weight (g): 19.2 ± 2.4 vs 21.5 ± 2.9. ↑ relative liver weight (%): 3.4 ± 0.3 vs 3.8 ± 0.3. ↑ hepatocellular hypertrophy: 0 vs 3. Females: No effects on liver reported. Recovery not assessed.	Males: 100 / 300 Females: 1000 / NA*.

PFBS CAS No. 29420-49-3 >97%. NICNAS. (2005)	Sprague-Dawley rats. Male and female. 10/ sex/dose.	0, 100, 300 or 900. Gavage, Carboxymethylcellulose, 28 days, OECD 407, GLP study. Recovery, 0 and 900, 14 days.	NR	Males (mean ± SE): ↑ absolute liver weight: 25% increase (quantitative data not reported). ↑ relative liver weight: 30% increase (quantitative data not reported). Females: No effects on liver reported. Recovery Liver weight comparable to controls.	Males: 300 / 900 Females: 900 / NA*	

PFBS 29420-49-3 >98%. NICNAS. (2005)	Crl:CDv(SD) IGS BR VAF/Plusv rats. Male and female, 10/ sex/dose.	0, 60, 200 or 600 Gavage. Carboxymethylcellulose 90 days, OECD 408, GLP study.	NR	Males (mean ± SEM): No effects on liver reported. Females: ↑ TP: 7% decrease (quantitative data not reported). ↑ albumin: 10% decrease (quantitative data not reported). Recovery not assessed.	Males: 600 / NA* Females: 200 / 600*.

				Males (mean ± SE): ↑ relative liver weight (mg/g body weight): 35.2 ± 0.79 vs 39.90 ± 0.48. ↓ TP (g/dL): 6.6 ± 0.0 vs 6.4 ± 0.1. ↓ globulin (g/dL): 2.3 ± 0.00 2.3 ± 0.1. ↓ cholesterol (mg/dL): 133 ± 6 vs 110 ± 4.	
PFBS CAS no. 375-73-5 >97%. NTP. (2022a)	Sprague-Dawley rats. Male and female. 10/sex/dose.	0, 62.6, 125, 250, 500 or 1000. Gavage, 2% Tween® 80 28 days, NTP protocol, GLP study (FDA GLP Regs).	At 62.6 mg/kg bw/day in males (mean ± SE), Plasma: 2.2 ± 4.8, Liver: 1.3 ± 0.2. At 62.6 mg/kg bw/day in females. Plasma: 0.2 ± 0.05 Liver: NR. At 125 mg/kg bw/day in females,	↑ gene expression of Cyp4a1: 1.12 ± 0.17 vs 2.83 ± 0.49. ↑ gene expression of Cyp2b1:1.59 ± 0.41 vs 11.66 ± 2.78. ↑ gene expression of Cyp2b2: 1.27 ± 0.25 vs 7.72 ± 1.42. Females: ↑ relative liver weight	Males: NA / 62.6 Females: 62.6 / 12