Table 3

In this guide

In this guide

This is a paper for discussion. This does not represent the views of the Committee and should not be cited.

Table 3. Acute toxicity studies for PFCAs – PFOA

*Derived by contractor; ** calculated according to EFSA. (2012); NR – not reported; NA – not applicable.

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).	Published NOAEL / LOAEL (mg/kg bw)	Study autho conclusions
PFOA CAS No. not given 96%. Cheng and Klaassen (2008)	C57BL/6, mice Male 5/dose.	0 or 40 Propylene glycol:water i.p. Single dose Non-GL study GLP not stated.	NR	Males: ↑ mRNA of cyp2B10, 3A11 and 4A14 in liver (data only reported in figures). ↑ protein levels of cyp2B and 4A in liver (data only reported in figures). Recovery not assessed.	Males: NA / 40*	PFOA increased the expression of Cyp2B10 and 4A14 in mous liver.

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).	Published NOAEL / LOAEL (mg/kg bw)	Study autho conclusions
PFOA (ammonium salt) CAS No. not given 97%. Das et al. (2017)	SV129 mice (wild type and PPAR-α null) Male 4/dose.	0 or 10 m/kg bw/day. Deionized water, Gavage, 7 days, Non-GL study, GLP not stated.	NR	Males: ↑ absolute and relative liver weight (data only reported in figures). ↑ lipid and TGs (data only reported in figures). Changes in mRNA related to transport, fatty acid, TG and cholesterol synthesis and omega oxidation. Recovery not assessed.	Males: NA / 10	PFOA caused extensive micro and macro-vesicular steatosis in hepatocytes and that the steatosis was associated with increase in the accumulation of TG in the liver.

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).	Published NOAEL / LOAEL (mg/kg bw)	Study autho conclusions
		0 or 300		Males (mean ± SD): ↑ hepatic cell proliferation (%): 0.22 ± 0.14 vs 0.74 ± 0.55,		The objective of the work was to characterize PFOA-induce hepatomegal in male rats, particularly with respect the potential role of PPAR- -mediated ce proliferation and possible decreased apoptosis. Clinical chemistry findings were consistent with those associated with PPAR activation, notably decreased serum total

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).	Published NOAEL / LOAEL (mg/kg bw)	Study autho conclusions
PFOA CAS No. not given Purity not given. Kawashima et al. (1995)	Wistar rats Male 4/dose.	0, 0.0025, 0.005, 0.01, 0.02 or 0.04% equivalent to 0, 3, 6, 12, 24 or 48**, i.p. 5 days, Non-GL study. GLP not stated.	NR	Males: ↑ acyl transferase activity (data only reported in figures). ↓ GSH S-transferase (data only reported in figures). ↑ TG (data only reported in figures). Recovery not assessed.	Males: NA / 3*	Morphologica studies demonstrate that the administratio of PFOA resulted in a marked proliferation peroxisomes in hepatocytes. PFOA produced tri-acylglycerol and cholesterol accumulation in liver. This seems inconsistent with the marked inductions of both peroxisome proliferation