

**Table 5. PFC serum levels in children (samples drawn in 1994-1995, ages 2-12, n = 599) (Olsen 2002a)**

Compound	Geometric mean	Average	Median	95 <sup>th</sup> percentile	Range/ < LLOQ(N)**
PFOS (C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> <sup>-</sup> )	37.5 ppb* (95%CI: 36.0 - 39.1) M: 40.1 F: 35.2	43.5 ppb	36.7 ppb	90.2 ppb	6.7 - 515 ppb <4.3 (0)
PFOA (C <sub>7</sub> F <sub>15</sub> CO <sub>2</sub> <sup>-</sup> )	4.9 ppb* (95%CI 4.7 - 5.1) M: 5.2 F: 4.7	5.6 ppb	5.1 ppb	10.2 ppb	<LLOQ (1.9) -56.1 ppb <1.9 (5)
PFHS (C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> <sup>-</sup> )	4.5 ppb* (95%CI: 4.1 - 5.1) M: 5.3 F: 3.9	15.0 ppb	3.8 ppb	71.3 ppb	<LLOQ (1.4) - 711.7 ppb <1.4 (92)
PFOSAA [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(C <sub>2</sub> H <sub>5</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	3.3 ppb (95%CI 3.1 - 3.6) M: 3.3 F: 3.4	4.4 ppb	3.7 ppb	10.4 ppb	<LLOQ (1.6) - 23.8 ppb <1.6 (67)
M570 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(CH <sub>3</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	1.9 ppb (95%CI 1.7 - 2.1) M: 2.0 F: 1.8	3.4 ppb	1.8 ppb	12.5 ppb	<LLOQ (1.0) - 48 ppb <1.0 (140)
M556 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	2.4 ppb (95%CI 2.2 - 2.5)	***	***	***	<LLOQ (2.5)-9.9 ppb <2.5 (457)
PFOSA (C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH <sub>2</sub> )	***	***	***	***	*** <1.0 (457)
TOF	38.9 ppb* (95%CI 37.2 - 40.7) M: 41.6 F: 36.4	not presented	not presented	not presented	9.6 - 803.7

\* Significant sex difference ; \*\* LLOQ = lower limit of quantitation; \*\*\* Not presented because too few samples exceeded the LLOQ  
 TOF = total organic fluorine = the percent of each of the seven fluorochemicals' molecular weight that was attributed to organic fluorine  
 [PFOS (64.7%); PFHS (61.9%); PFOA (69%); PFOSAA (55.3%); PFOSA (64.7%); M570 (56.6%); and M556 (58.1%)] multiplied by the concentration measured for each fluorochemical and then summed across all seven fluorochemicals

**Table 6. PFC serum levels in adults (samples drawn in 2000, focusing on ages 20-69, n = 645) (Olsen 2002b)**

Compound	Geometric mean	Average	Median	95 <sup>th</sup> percentile	Range/ < LLOQ(N)**
PFOS (C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> <sup>-</sup> )	34.9 ppb* (95%CI 33.3 – 36.5) M: 37.8 F: 32.1	43.7 ppb	35.8 ppb	90.5 ppb	<LLOQ (4.3) - 1656 ppb <4.3 (1)
PFOA (C <sub>7</sub> F <sub>15</sub> CO <sub>2</sub> <sup>-</sup> )	4.6 ppb* (95%CI 4.3 – 4.8) M: 4.9 F: 4.2	5.6 ppb	4.7 ppb	12.9 ppb	<LLOQ (1.9) - 52.3 ppb <1.9 (2)
PFHS (C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> <sup>-</sup> )	1.9 ppb* (95%CI 1.8 – 2.0) M: 2.2 F: 1.6	2.9 ppb	1.6 ppb	9.6 ppb	<LLOQ (1.4) - 66.3 ppb <1.4 (72)
PFOSAA [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(C <sub>2</sub> H <sub>5</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	2.0 ppb (95%CI 1.9 – 2.1) M: 1.9 F: 2.1	3.0 ppb	1.4 ppb	7.6 ppb	<LLOQ (1.6) - 60.1 ppb <1.6 (101)
M570 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(CH <sub>3</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	1.3 ppb (95%CI 1.3 – 1.4) M: 1.3 F: 1.3	1.8 ppb	0.9 ppb	5.3 ppb	<LLOQ (1.0) - 19.0 ppb <1.0 (63)
M556 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	***	***	***	***	<LLOQ-12.9 ppb <2.5 (145)
PFOSA (C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH <sub>2</sub> )	***	***	***	***	*** <1.0 (196)
TOF	31.7 ppb (95%CI 30.4 - 33) M: 41.6 F: 36.4	Not presented	Not presented	Not presented	5.7 – 1083.2

\* Significant sex difference

\*\* LLOQ = lower limit of quantitation

\*\*\* Not presented because too few samples exceeded the LLOQ

TOF = total organic fluorine = the percent of each of the seven fluorochemicals' molecular weight that was attributed to organic fluorine [PFOS (64.7%); PFHS (61.9%); PFOA (69%); PFOSAA (55.3%); PFOSA (64.7%); M570 (56.6%); and M556 (58.1%)] multiplied by the concentration measured for each fluorochemical and then summed across all seven fluorochemicals

**Table 7. PFC serum levels in elderly adults (focusing on ages 65-96, n = 238 ) [Olsen 2002c]**

Compound	Geometric mean	Median	Cumulative 90%	Range/ < LLOQ(N)**
PFOS (C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> <sup>-</sup> )	31.0 ppb (95%CI 28.8 – 33.4) M: 30.2 F: 31.9	30.2 ppb	61.3 ppb	<LLOQ (3.4) – 175.0 ppb <3.4 (1)
PFOA (C <sub>7</sub> F <sub>15</sub> CO <sub>2</sub> <sup>-</sup> )	4.2 ppb (95%CI 3.9 – 4.5) M: 4.0 F: 4.4	4.2 ppb	7.8 ppb	<LLOQ (1.4) – 16.7 ppb <1.4 (5)
PFHS (C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> <sup>-</sup> )	2.2 ppb (95%CI 2.0 – 2.4) M: 2.3 F: 2.1	2.3 ppb	6.4 ppb	<LLOQ (1.4) – 40.3 ppb <1.4 (58)
PFOSAA [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(C <sub>2</sub> H <sub>5</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	1.5 ppb (95%CI 1.4 – 1.7) M: 1.4 F: 1.6	1.6 ppb	5.3 ppb	<LLOQ (1.6) – 21.1 ppb <1.6 (115)
M570 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> N(CH <sub>3</sub> )-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	1.2 ppb (95%CI 1.1 – 1.3) M: 1.3 F: 1.1	1.3 ppb	3.0 ppb	<LLOQ (1.0) – 6.6 ppb <1.0 (83)
M556 [C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH-CH <sub>2</sub> CO <sub>2</sub> <sup>-</sup> ]	***	***	***	<LLOQ (1.0) – 4.8 <1.0 (230)
PFOSA (C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> NH <sub>2</sub> )	***	***	***	Not presented (too few exceeded LLOQ) <1.0 (238)
TOF	28.2 ppb (95%CI 26.4 – 30.1)	Not presented	Not presented	3.7 – 133.1

\*\* LLOQ = lower limit of quantitation

\*\*\* Not presented because too few samples exceeded the LLOQ

TOF = total organic fluorine = the percent of each of the seven fluorochemicals' molecular weight that was attributed to organic fluorine [PFOS (64.7%); PFHS (61.9%); PFOA (69%); PFOSAA (55.3%); PFOSA (64.7%); M570 (56.6%); and M556 (58.1%)] multiplied by the concentration measured for each fluorochemical and then summed across all seven fluorochemicals