

Supplemental:

Table S1. Acronyms, chemical names, chemical abstract services registry number (CASRN) and chemical formulas for organofluorine compounds listed in order of increasing number of carbons.

Acronym	Chemical name	CASRN	Formula
PFBA	perfluoro-n-butanoic acid	375-22-4	C ₄ HF ₇ O ₂
PF4OPeA	perfluoro-4-oxapentanoic acid	377-73-1	C ₄ HF ₇ O ₃
FBSA-I	perfluoro-1-butanefulfonamide	30334-69-1	C ₄ H ₂ F ₉ NO ₂ S
PFBS	potassium perfluoro-1-butanefulfonate	29420-49-3	C ₄ F ₉ KO ₃ S
PFEESA	potassium perfluoro(2-ethoxyethane)sulfonate	117205-07-9	C ₄ F ₉ SO ₄ K
PFPeA	perfluoro-n-pentanoic acid	2706-90-3	C ₅ HF ₉ O ₂
PF5OHxA	perfluoro-5-oxahexanoic acid	863090-89-5	C ₅ HF ₉ O ₃
3,6-OPFHpA	perfluoro-3,6-dioxaheptanoic acid	151772-58-6	C ₅ HF ₉ O ₄
FBET	2-perfluorobutyl ethanol	2043-47-2	C ₆ H ₅ F ₉ O
HFPO-DA	2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid	13252-13-6	C ₆ HF ₁₁ O ₃
4:2 FTS	sodium 1H,1H,2H,2H-perfluorohexanesulfonate	27619-93-8	C ₆ H ₄ F ₉ SO ₃ Na
PFHxS	potassium perfluoro-1-hexanesulfonate	3871-99-6	C ₆ F ₁₃ KO ₃ S
PFHxPA	perfluorohexylphosphonic acid	40143-76-8	C ₆ H ₂ F ₁₃ PO ₃
FHUEA	2H-perfluoro-2-octenoic acid	70887-88-6	C ₈ H ₂ F ₁₂ O ₂
FHEA	2-perfluorohexyl ethanoic acid	53826-12-3	C ₈ H ₃ F ₁₃ O ₂
PFOA	perfluoro-n-ctanoic acid	335-67-1	C ₈ HF ₁₅ O ₂
6:2 PAP	sodium 1H,1H,2H,2H-perfluorooctylphosphonate	NA	C ₈ H ₄ F ₁₃ O ₄ PNa ₂
PFOS	potassium perfluoro-1-octanesulfonate	2795-39-3	C ₈ F ₁₇ KO ₃ S
9Cl-PF3ONS	potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	73606-19-6	C ₈ F ₁₆ ClSO ₄ K
PFDA	perfluoro-n-decanoic acid	335-76-2	C ₁₀ HF ₁₉ O ₂
FOSAA	perfluoro-1-octanesulfonamidoacetic acid	2806-24-8	C ₁₀ H ₄ F ₁₇ NO ₄ S
PFDDPA	perfluorodecylphosphonic acid	52299-26-0	C ₁₀ H ₂ F ₂₁ PO ₃
11Cl-PF3OUdS	potassium 11-chloroeicosalfluoro-3-oxaundecane-1-sulfonate	83329-89-9	C ₁₀ F ₂₀ ClSO ₄ K
N-AP-FHxSA	N-(3-dimethylaminopropan-1-yl)perfluoro-1-hexanesulfonamide	50598-28-2	C ₁₁ H ₁₃ F ₁₃ N ₂ O ₂ S
N-MeFOSE	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	24448-09-7	C ₁₁ H ₈ F ₁₇ NO ₃ S
FDUEA	2H-perfluoro-2-dodecenoic acid	70887-94-4	C ₁₂ H ₂ F ₂₀ O ₂
FDET	2-perfluorodecyl ethanol	865-86-1	C ₁₂ H ₅ F ₂₁ O
N-EtFOSE-M	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	1691-99-2	C ₁₂ H ₁₀ F ₁₇ NO ₃ S
FDEA	2-perfluorodecyl ethanoic acid	53826-13-4	C ₁₂ H ₃ F ₂₁ O ₂
N-TamP-FHxSA	N-[3-(perfluoro-1-hexanesulfonamido)propan-1yl]-N,N,N-trimethylammonium	38850-51-0	C ₁₂ H ₁₅ F ₁₃ N ₂ O ₂ S
10:2 FTS	sodium 1H,1H,2H,2H-perfluorododecane sulfonate	108026-35-3	C ₁₂ H ₄ F ₂₁ SO ₃ Na
6:6 PFPi	sodium bis(perfluorohexyl)phosphonic acid	70609-44-8	C ₁₂ F ₂₆ PO ₂ Na
Fluconazole	2-(2,4-Difluorophenyl)-1,3-bis(1H-1,2,4-triazol-1-yl)propan-2-ol	86386-73-4	C ₁₃ H ₁₂ F ₂ N ₆ O
Trifluralin	2,6-Dinitro-N,N-dipropyl-4-(trifluoromethyl)aniline	1582-09-8	C ₁₃ H ₁₆ F ₃ N ₃ O ₄
PFTeDA	Perfluoro-n-tetradecanoic acid	376-06-7	C ₁₄ HF ₂₇ O ₂
N-CMAmp-6:2FOSA	N-(carboxymethyl)-N,N-dimethyl-N-[3-(1H,1H,2H,2H-perfluoro-1-octanesulfonamido)propan-1-yl]ammonium	34455-29-3	C ₁₅ H ₁₉ F ₁₃ N ₂ O ₄ S
Oxyfluorfen	2-Chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene	42874-03-3	C ₁₅ H ₁₁ ClF ₃ NO ₄
Atorvastatin	Calcium bis{(3R,5R)-7-[2-(4-fluorophenyl)-3-phenyl-4-(phenylcarbamoyl)-5-(propan-2-yl)-1H-pyrrol-1-yl]-3,5-dihydroxyheptanoate}	134523-03-8	C ₆₆ H ₆₈ F ₂ N ₄ O ₁₀

Table S2. LFB AOF-CIC recoveries and precision of PFAS using a) 1.0 g/L KNO₃ in the sample and GAC wash and b) 8.2 g/L KNO₃ in the GAC wash. TXA-04 adsorption unit used for all data. Chemicals listed in order of increasing number of carbons.

Chemical	Spike Concentration µg/L	1.0 g/L KNO ₃ in Sample and GAC Wash LFB Recovery, %	RSD, %	Spike Concentration µg/L	8.2 g/L KNO ₃ in GAC Wash LFB Recovery, %	RSD, %
PFBA	19.9	72.2	3.2	9.9	47.0	0.068
PF4OPeA	19.9	106	2.2	10.1	101	2.2
FBSA-I	20.0	101	1.3	10.0	94.9	10
PFBS	19.9	98.1	1.2	9.9	116	11
PFEESA	20.0	92.6	13	10.1	89.5	1.0
PFPeA	20.1	94.2	0.78	10.0	108	0.70
PF5OHxA	20.1	108	2.3	10.1	110	0.72
3,6-OPFHpA	19.9	108	2.1	10.1	110	5.3
PFPeS	19.9	99.5	3.0	7.0	105	7.8
FBET	20.1	85.3	8.5	10.0	94.8	3.9
HFPO-DA	19.2	100	1.4	10.1	93.8	1.9
4:2 FTS	19.8	106	4.0	10.0	106	0.45
PFHxS	20.0	94.8	2.6	10.0	102	2.3
PFHxPA	20.1	104	12	9.9	91.1	11
FHUEA	20.1	105	1.3	20.1	101	2.2
FHEA	20.0	88.0	3.8	19.9	99.5	0.92
PFOA	20.6	89.2	3.1	10.3	78.0	5.6
6:2 PAP	20.0	83.5	1.2	10.1	81.3	15
PFOS	19.4	72.2	2.1	10.2	87.5	3.3
9CI-PF3ONS	20.0	56.2	6.9	10.1	88.8	7.2
PFDA	21.1	46.7	6.8	9.8	82.6	1.5
FOSAA	20.0	46.7	6.3	10.1	82.6	4.2
PFDPA	19.9	85.1	2.2	10.0	99.1	6.8
11CI-PF3OUdS	20.1	35.9	10	9.9	46.2	21
N-AP-FHxSA	19.9	62.2	4.0	9.9	46.3	14
N-MeFOSE	20.0	30.4	12	10.1	21.2	4.1
FDUEA	20.1	42.5	1.1	20.1	48.5	13
FDET	20.2	72.2	0.19	9.9	47.7	4.9
N-EtFOSE	20.1	22.9	9.2	9.9	31.8	3.2
FDEA	19.9	36.7	5.5	20.0	50.7	9.7
N-TamP-FHxSA	20.0	53.9	10	9.9	64.0	15
10:2 FTS	19.9	24.1	16	10.1	59.0	7.0
6:6 PFPI	20.1	26.4	13	9.9	36.1	22
PFTeA	20.1	36.8	2.6	10.1	28.4	9.6
N-CMAmP-6:2FOSA	18.4	70.2	4.0	10.0	77.8	5.6

Table S3. LFB AOF-CIC recoveries (n=3) and precision of organofluorine chemicals using the APU sim and TXA-04 adsorption units. Chemicals listed in order of increasing number of carbons.

Chemical	APU sim Spike concentration µg/L	APU sim Recovery, %	APU sim RSD, %	TXA-04 Spike concentration µg/L	TXA-04 Recovery, %	TXA-04 RSD, %
PFBA	9.9	64.2	5.2	9.9	47.0	0.068
PF4OPeA	10.1	98.0	4.3	10.1	101	2.2
FBSA-I	10.0	97.8	3.5	10.0	94.9	10
PFBS	9.9	99.3	24	9.9	116	11
PFEESA	10.1	90.3	2.7	10.1	89.5	1.0
PFPeA	10.0	90.4	12	10.0	108	0.70
PF5OHxA	10.1	96.8	4.3	10.1	110	0.72
3,6-OPFHpA	10.1	99.6	2.0	10.1	110	5.3
PFPeS	10.1	105	5.9	7.0	105	7.8
FBET	10.0	91.7	6.2	10.0	94.8	3.9
HFPO-DA	10.1	98.0	4.2	10.1	93.8	1.9
4:2 FTS	10.0	98.6	3.3	10.0	105	0.45
PFHxS	10.0	105	1.0	10.0	102	2.3
PFHxPA	9.9	90.7	1.8	9.9	91.1	11
FHUEA	9.9	96.9	3.2	20.1	102	2.2
FHEA	10.1	98.4	2.2	19.9	99.5	0.92
PFOA	10.3	82.5	0.56	10.3	78.0	5.6
6:2 PAP	10.1	84.0	3.3	10.1	81.3	15
PFOS	10.2	98.6	4.3	10.2	89.3	3.3
9Cl-PF3ONS	10.1	88.0	5.8	10.1	88.8	7.2
PFDA	9.8	70.7	3.0	9.8	82.6	1.5
FOSAA	10.1	83.5	1.6	10.1	82.6	4.2
PFDPA	10.0	76.1	12	10.0	99.1	6.8
11Cl-PF3OUdS	10.0	63.7	20	9.9	46.2	21
N-AP-FHxSA	9.9	84.0	2.0	9.9	46.3	14
N-MeFOSE	10.1	38.0	40	10.1	21.2	4.1
FDUEA	9.9	62.7	4.5	20.1	48.5	13
FDET	9.9	47.7	9.6	9.9	47.7	4.9
N-EtFOSE-M	9.9	41.3	7.3	9.9	31.8	3.2
FDEA	10.0	62.6	8.9	20.0	50.7	9.7
N-TamP-FHxSA	9.9	78.1	4.6	9.9	64.0	15
10:2 FTS	10.1	69.9	2.4	10.1	59.0	7.0
6:6 PFPi	9.9	76.2	2.7	9.9	36.1	22
Fluconazole	12.5	97.8	2.6	12.5	101	3.8
Trifluralin	17.0	49.7	5.9	17.0	49.6	2.7
PFTeDA	10.1	45.4	1.9	10.1	28.4	9.6
N-CMAmP-6:2FOSA	10.0	77.4	3.1	10.0	77.8	5.6
oxyfluorfen	15.6	50.9	7.8	15.6	47.1	14
atorvastatin	10.1	87.2	2.9	10.1	87.4	2.3