

Supplementary Information

Previously unidentified sources of perfluoroalkyl and polyfluoroalkyl substances from building materials and industrial fabrics

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Table of Contents

Table S1: List of used instruments; showing autosampler, UPLC and mass spectrometer.....	3
Table S2: List of injection volume, column temperature, as well as used separation column and mobile phases	3
Table S3: Gradient program used in the present work	3
Table S4: List of purchased standard materials; showing abbr. and full name of compounds, Standard materials were purchased from Wellington Laboratories Inc. (Ontario, Canada) or Chiron AS (Trondheim, Norway).	3
Table S5: List of investigated analytes and corresponding internal standards, showing their transitions and t_R	4
Table S6: List of individual concentrations for all investigated building material samples and analyzed PFAAs, non-volatile and volatile precursors; resulting from methanol extracts	12
Table S7: List of individual concentrations for all investigated building material samples and analyzed PFAS and non-volatile precursors; resulting from water extracts.....	13
Table S8: List of individual concentrations for all investigated fabric samples and analyzed PFAAs, non-volatile and volatile precursors; resulting from methanol extracts	14
Table S9: List of individual concentrations for all investigated fabric samples and analyzed PFAS and non-volatile precursors; resulting from water extracts	15
Table S10: List of adjusted quantification limits	16
Table S11: List of individual samples and corresponding arrival and analysis dates.....	18
Table S12: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, PFDA, PDUnda, PFDoDA, PFTrDA, PFTeDA	19
Table S13: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PFBS, PFPeS, PFHxS, PFHpS, PFOS, PFDS, PFDoDS, 8:2 FTCA, 8:3 FTCA, 7HPFHpA.....	20
Table S14: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PF37DMOA, 4:2 FTS, 6:2 FTS, 8:2 FTS, 6:2 FTOH, 8:2 FTOH, 10:2 FTOH.....	21
Table S15: Recoveries and RSD values of experiments showing extraction efficiency over multiple extractions (n=3) for three representative samples as methanol extracts and two representative samples as water extracts and a comparison of matrix effects and method recoveries (prior vs. post extraction spike) as methanol extracts of three samples;	

were spiked prior to extraction (H ₂ O extracts) or prior and post extraction (methanol extracts)	22
Table S16: Recoveries and RSD values of experiments showing extraction efficiency over multiple direct measurements (n=3) for one representative sample; samples were spiked prior to direct measurement	24
Table S17: Blanks across the whole extraction procedure (empty tube), showing blank concentrations and extraction efficiency from empty PP tubes that were spiked prior to extraction as well as corresponding recoveries	25
Figure S1: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B3) in awning 1; top (A): sample; bottom (B): sample + 10 ng/mL spike	6
Figure S2: Chromatograms of 6:2 FTOH (A-1 and A-2), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in sealant 1; top (A): sample; bottom (B): sample + 2 ng/mL spike	7
Figure S3: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in awning 5; top (A): sample; bottom (B): sample + 10 ng/mL spike	8
Figure S4: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in OSB 1; top (A): sample; bottom (B): sample + 10 ng/mL spike	9
Figure S5: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in car seat cover 2; top (A): sample; bottom (B): sample + 2 ng/mL spike	10
Figure S6: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in coating 4; top (A): sample; bottom (B): sample + 2 ng/mL spike	11
Figure S7: Heat map of PFAS pairing derived from R ² values of scatterplots for building material samples	17
Figure S8: Heat map of PFAS pairing derived from R ² values of scatterplots for fabric samples	17
Figure S9: Comparison of relative extraction efficiencies of methanol and water extracts with the differentiation of long chain and short chain PFAAs and corresponding \sum PFAAs	25

Table S1: List of used instruments; showing autosampler, UPLC and mass spectrometer

Autosampler	Chromatographic system	Mass analyzer
CTC PAL	Agilent 1290 Infinity	AB Sciex Triple Quad 5500
CTC PAL	Agilent 1290 Infinity	AB Sciex Triple Quad 6500
Acquity UPLC	Acquity UPLC Binary Solve	Waters Xevo TQ MS

Table S2: List of injection volume, column temperature, as well as used separation column and mobile phases

Injection volume [μL]	10
Column oven temperature [$^{\circ}\text{C}$]	25
Column	Waters AQUITY UPLC BEH T3 1.7 μm , 2.1x100 mm
Mobile phase A	H ₂ O LC-MS grade + 20 mMol Ammonium acetate
Mobile phase B	MeOH LC-MS grade + 20 mMol Ammonium acetate

Table S3: Gradient program used in the present work

Step	Time [min]	Flow rate [$\mu\text{L}/\text{min}$]	Mobile phase A [%]	Mobile phase B [%]
0	0.0	300	90	10
1	1.5	300	90	10
2	2.1	300	35	65
3	4.6	300	27	73
4	6.5	300	27	73
5	8.2	300	0	100
6	10.7	300	0	100
7	10.9	300	90	10
8	12.9	300	90	10

Table S4: List of purchased standard materials; showing abbr. and full name of compounds, Standard materials were purchased from Wellington Laboratories Inc. (Ontario, Canada) or Chiron AS (Trondheim, Norway).

Abbr.	Name of purchased compound	Abbr.	Name of purchased compound
PFBA	Perfluorobutanoic acid	8:2 FTCA	2H,2H-Perfluorodecanoic acid
PFBS	Potassium perfluorobutane sulfonate	8:3 FTCA	2H,2H,3H,3H-Perfluoroundecanoic acid
PFPeA	Perfluoropentanoic acid	6:2 FTOH	1H,1H,2H,2H-Perfluorooctanol
PFPeS	Sodium perfluoropentane sulfonate	8:2 FTOH	1H,1H,2H,2H-Perfluorodecanol
PFHxA	Perfluorohexanoic acid	10:2 FTOH	1H,1H,2H,2H-Perfluorododecanol
PFHxS	Sodium perfluorohexane sulfonate	¹³ C ₄ PFBA	Perfluoro-n-[1,2,3,4- ¹³ C ₄]-butanoic acid
PFHpA	Perfluoroheptanoic acid	¹³ C ₃ PFBS	Sodium perfluoro-1-[2,3,4- ¹³ C ₃]-butane sulfonate
PFHpS	Sodium perfluoroheptane sulfonate	¹³ C ₅ PFPeA	Perfluoro-n-[¹³ C ₅]-pentanoic acid
PFOA	Perfluorooctanoic acid	¹⁸ O ₂ PFHxS	Sodium perfluoro-1-hexane-[¹⁸ O ₂] sulfonate
PFOS	Sodium perfluorooctane sulfonate	¹³ C ₂ PFHxA	Perfluoro[1,2- ¹³ C ₂]hexanoic acid
PFOSA	Perfluorooctane sulfonamide	¹² C ₄ PFHpA	Perfluoro-n-[1,2,3,4- ¹³ C ₄]-heptanoic acid
PFNA	Perfluorononanoic acid	¹³ C ₄ PFOA	Perfluoro-n-[1,2,3,4- ¹³ C ₄]-octanoic acid
PFDA	Perfluorodecanoic acid	¹³ C ₄ PFOS	Sodium perfluoro-1-[1,2,3,4- ¹³ C ₄]octane sulfonate
PFDS	Sodium perfluorodecane sulfonate	¹³ C ₈ PFOSA	Perfluoro-1-[¹³ C ₈]-octansulfonamide
PFUnDA	Perfluoroundecanoic acid	¹³ C ₅ PFNA	Perfluoro-n-[1,2,3,4,5- ¹³ C ₅]-nonanoic acid
PFDoDA	Perfluorododecanoic acid	¹³ C ₂ MPFDA	Perfluoro-n-[1,2- ¹³ C ₂]-decanoic acid
PFDoDS	Sodium perfluorododecane sulfonate	¹³ C ₂ PFUnDA	Perfluoro-n-[1,2- ¹³ C ₂]-undecanoic acid
PFTrDA	Perfluorotridecanoic acid	¹³ C ₂ PFDoDA	Perfluoro-n-[1,2- ¹³ C ₂]-dodecanoic acid
PFTeDA	Perfluorotetradecanoic acid	¹³ C ₂ PFTeDA	Perfluoro-n-[1,2- ¹³ C ₂]-tetradecanoic acid
7HPFHpA	7H-Perfluoroheptanoic acid	¹³ C ₅ PFPeA	Perfluoro-n-[¹³ C ₅]-pentanoic acid
PF37DMOA	Perfluoro-3,7-dimethyloctanoic acid	¹³ C ₂ H4PFHxS	Sodium 1H,1H,2H,2H-perfluoro-[1,2- ¹³ C ₂]-hexane sulfonate
4:2 FTS	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate	¹³ C ₂ P4PFOS	Sodium 1H,1H,2H,2H-perfluoro-[1,2- ¹³ C ₂]-octane sulfonate
6:2 FTS	1H,1H,2H,2H-Perfluorooctane sulfonic acid	¹³ C ₂ H4PFDS	Sodium 1H,1H,2H,2H-perfluoro-[1,2- ¹³ C ₂]-decane sulfonate
8:2 FTS	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate	¹³ C ₂ H4PFDS	2-Perfluorooctyl-[1,2- ¹³ C ₂]-ethanoic acid

Table S5: List of investigated analytes and corresponding internal standards, showing their transitions and t_R

Analyte Abbr.	MRM		t_R [min]	IS Abbr.	MRM _{IS}		t_R [min]
	Q1	Q3			Q1	Q3	
PFBA	213	169	1.6	¹³ C ₄ PFBA	217	172	1.6
PFBS	299	80	3.5	¹³ C ₃ PFBS	302	80	3.5
		99					
PFPeA	263	219	3.2	¹³ C ₅ PFPeA	268	223	3.2
PFPeS	349	80	4.4	¹⁸ O ₂ PPHxS	403	84	5.1
		99					
PFHxA	313	269	4.3	¹³ C ₂ PFHxA	315	270	4.3
		119					
PFHxS	399	80	5.1	¹⁸ O ₂ PPHxS	403	84	5.1
		99					
PFHpA	363	319	5.1	¹² C ₄ PFHpA	367	322	5.1
		169					
PFHpS	449	80	5.7	¹⁸ O ₂ PPHxS	403	84	5.1
		99					
PFOA	413	369	5.6	¹³ C ₄ PFOA	417	372	5.6
		169					
PFOS	499	80	6.1	¹³ C ₄ PFOS	503	80	6.1
		99					
PFOSA	498	78	6.9	¹³ C ₈ PFOSA	506	78	6.9
		169					
PFNA	463	419	6.1	¹³ C ₅ PFNA	468	423	6.1
		219					
PFDA	513	469	6.5	¹³ C ₂ MPFDA	515	470	6.5
		219					
PFDS	599	80	6.9	¹³ C ₂ MPFDA	515	470	6.5
		99					
PFUnDA	563	519	6.9	¹³ C ₂ PFUnDA	565	520	6.9
		219					
PFDoDA	613	569	7.3	¹³ C ₂ PFDoDA	615	570	7.3
		319					
PFDoDS	699	80	7.8	¹³ C ₂ PFDoDA	615	570	7.3
		99					
PFTrDA	663	619	7.9	¹³ C ₂ PFDoDA	615	570	7.3
		319					
PFTeDA	713	669	8.5	¹³ C ₂ PFTeDA	715	670	8.5
		319					
7HPFHpA	345	281	3.9	¹³ C ₅ PFPeA	268	223	3.2
PF37DMOA	469	269	6.3	¹³ C ₂ MPFDA	515	470	6.5
		219					
4:2 FTS	327	307	4.2	¹³ C ₂ H4PFHxS	329	81	4.2
		81					
6:2 FTS	427	407	5.6	¹³ C ₂ H4PFOS	529	81	5.6
		81					
8:2 FTS	527	507	6.5	¹³ C ₂ H4PFDS	459	81	6.5
		81					
8:2 FTCA	457	393	6.3	¹³ C ₂ H2PFDA	459	394	6.3
8:3 FTCA	491	387	6.7	¹³ C ₂ H2PFDA	615	570	6.3
6:2 FTOH	423	59	4.4	-	-	-	-
8:2 FTOH	523	59	4.9	-	-	-	-
10:2 FTOH	623	59	5.2	-	-	-	-

Table S6-S9 list the individual PFASs concentrations of analyzed building material and fabric samples both, for water and methanol extraction. Depending on analyzed matrix, quantification limits had to be adjusted (individual LOQs; see Table S10).

Figures S 1 to S 6 show exemplary chromatograms of quality assurance data for FTOHs. Figure S 1 shows the chromatograms of awning 1 with peaks that indicate detection of 6:2, 8:2 and 10:2 FTOH (top). Furthermore, spiked analyte at 10 ng/mL was detected (recoveries: 93% (6:2 FTOH), 90% (8:2 FTOH) and 164% (10:2 FTOH); bottom). High recovery of 10:2 FTOH in this particular sample most likely results from ion enhancing matrix effects. Figure S 2 shows a similar observation for sealant 1 (8:2 and 10:2 FTOH were detected; no 6:2 FTOH was detected; spiking experiments were performed at the method LOQ and showed sufficient recoveries for 6:2 FTOH (57%) and excellent recoveries for 8:2 FTOH (97%) and 10:2 FTOH (103%)). Figure S 3 shows the chromatograms of awning 5. A signal for 10:2 FTOH was observed and spiked analyte at 10 ng/mL was detected (107% recovery), however, 10:2 FTOH was detected below the method quantification limit. Furthermore, no 6:2 FTOH was detected and spiked analyte was detected (88% recovery). While, the observed signal for 8:2 FTOH suggests a detection thereof, recovery experiments reveal insufficient chromatographic separation as a consequence of interfering matrix components and thus, 8:2 FTOH was rated "not evaluable" for this sample. Figure S 4 shows the chromatograms of sample OSB 1. High matrix pollution leads to a higher baseline, which complicates flawless interpretation. However, spiking experiments provided clarification. Considering the high matrix load, excellent recoveries were observed for 6:2 (111%) and 10:2 FTOH (102%) and good recovery for 8:2 FTOH (65%). Figure S 5 shows the chromatograms of car seat cover 2. Neither 6:2, 8:2 nor 10:2 FTOH were detected above the method quantification limit. Spiked analyte at the method LOQ (2 ng/mL) was observed with a sufficient recovery for 6:2 FTOH (160%), good recovery for 10:2 FTOH (120%) and excellent recovery for 8:2 FTOH (100%). Figure S 6 shows the chromatograms for coating 4. Similar to observations for car seat cover 2, no FTOHs were detected above the method quantification limit. Spiking experiments at the method LOQ (2 ng/mL) led to a sufficient recovery for 6:2 FTOH (75%) and good recoveries for 8:2 FTOH (80%) and 10:2 FTOH (80%).

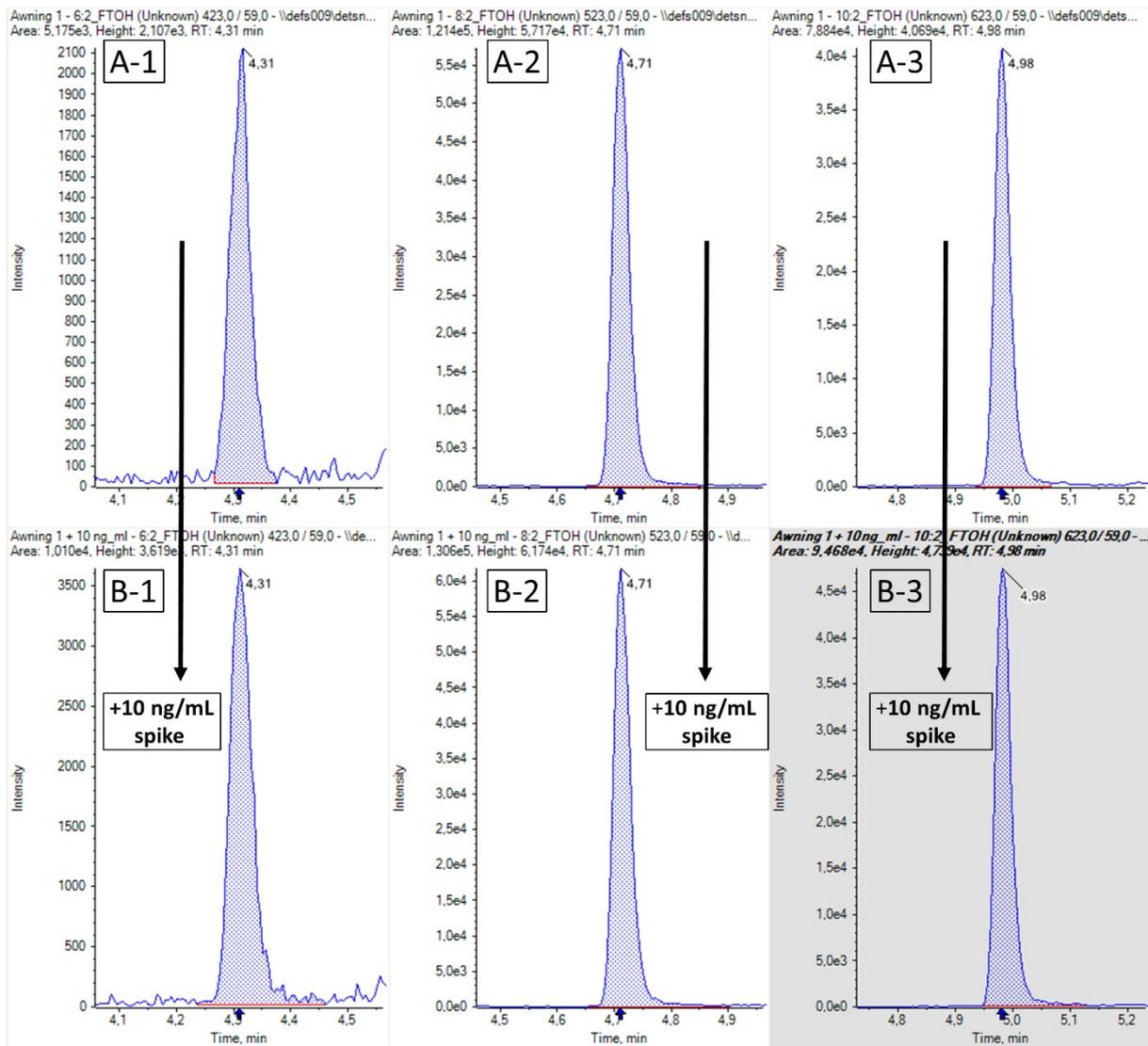


Figure S1: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B3) in awning 1;
top (A): sample; bottom (B): sample + 10 ng/mL spike

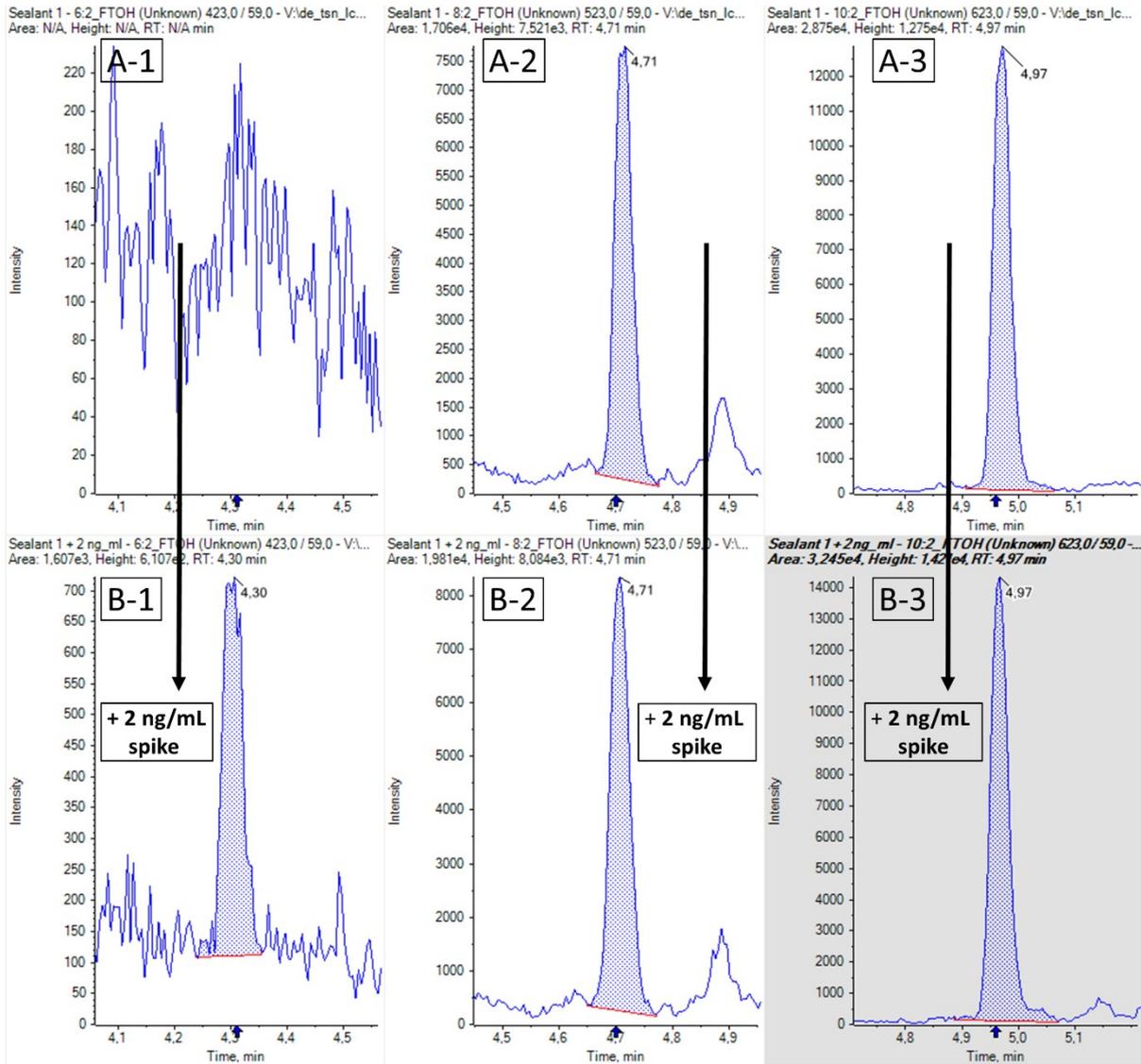


Figure S2: Chromatograms of 6:2 FTOH (A-1 and A-2), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in sealant 1;
top (A): sample; bottom (B): sample + 2 ng/mL spike

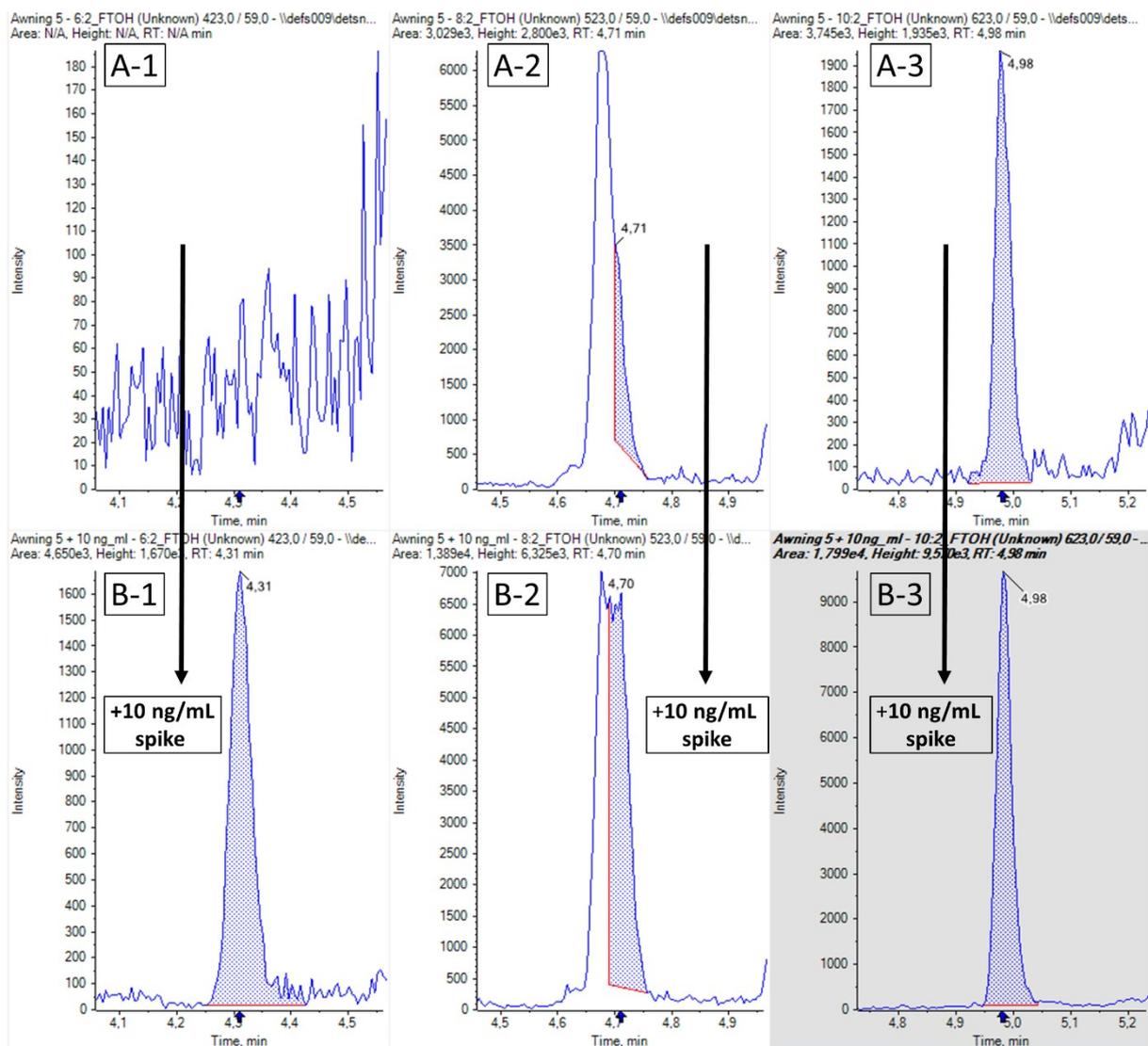


Figure S3: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in awning 5;
top (A): sample; bottom (B): sample + 10 ng/mL spike

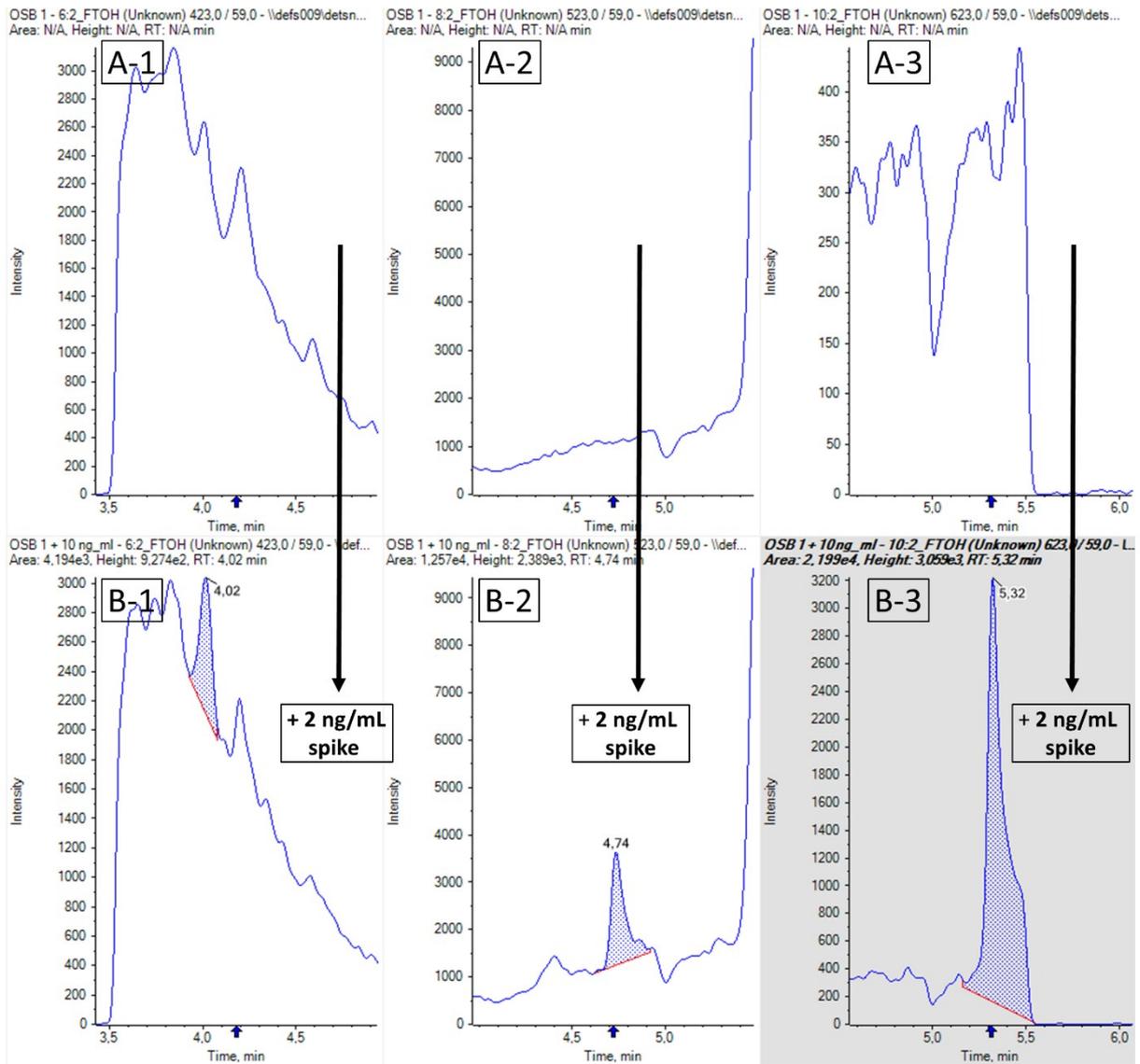


Figure S4: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in OSB 1;
top (A): sample; bottom (B): sample + 10 ng/mL spike

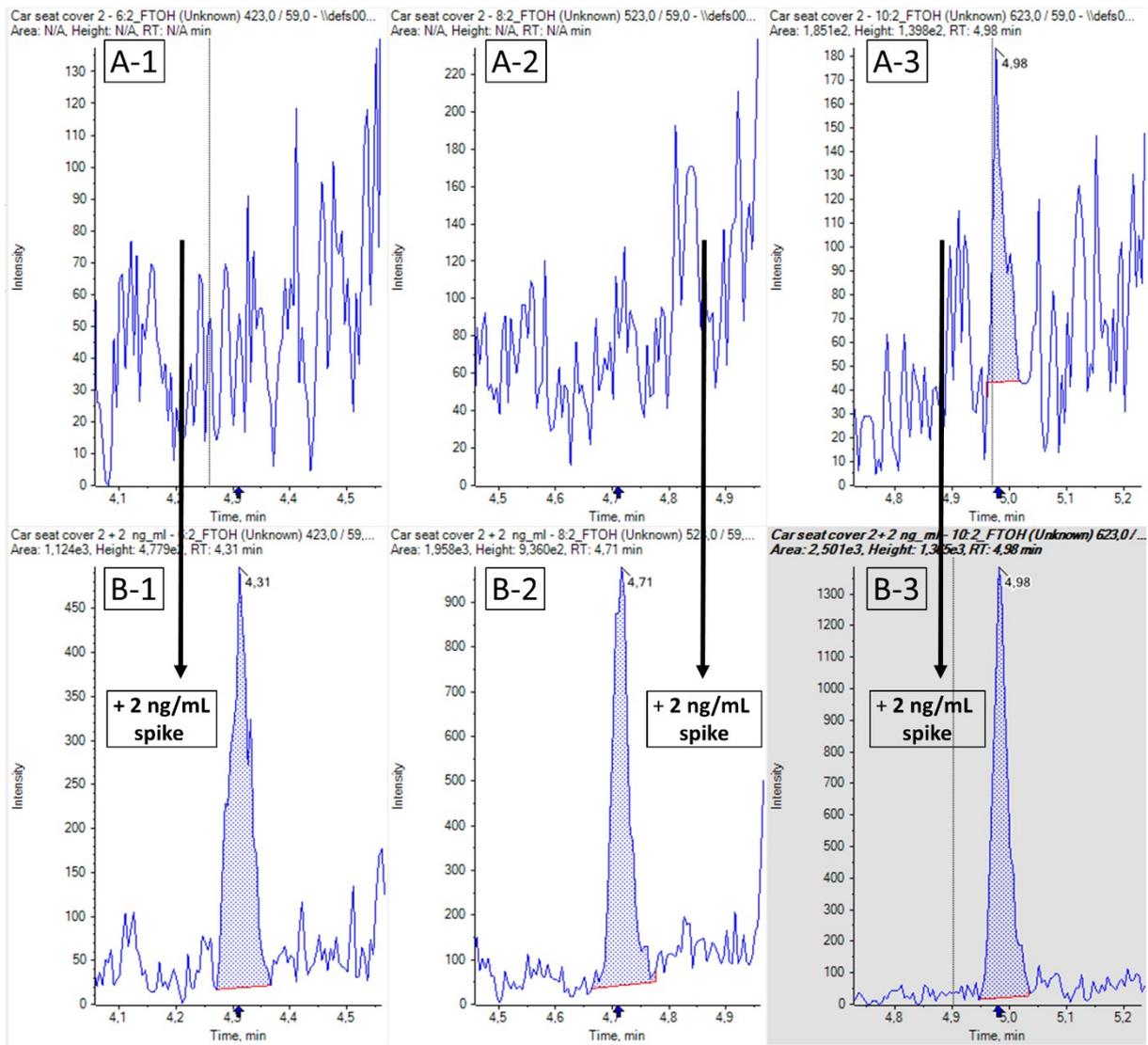


Figure S5: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in car seat cover 2; top (A): sample; bottom (B): sample + 2 ng/mL spike

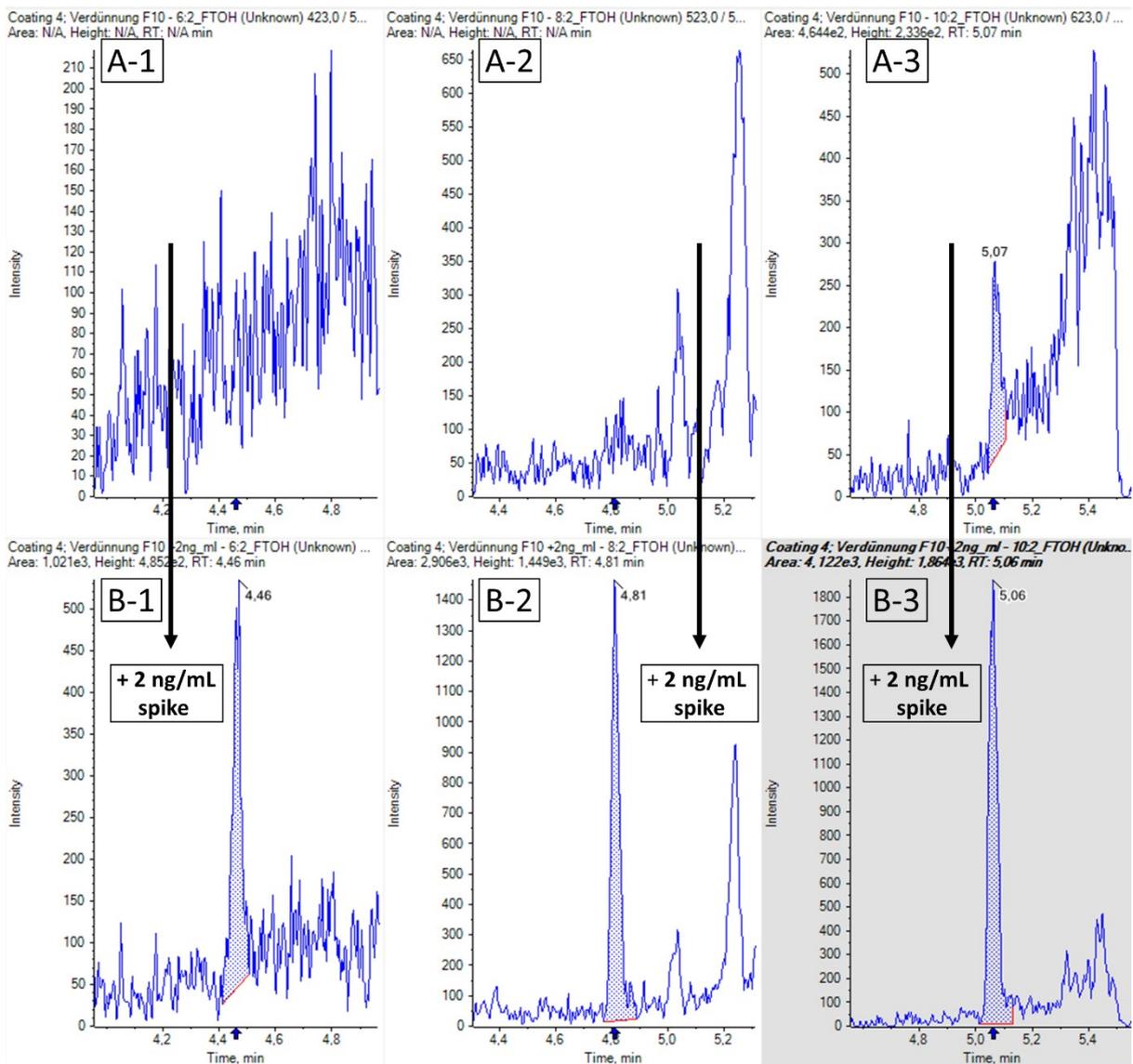


Figure S6: Chromatograms of 6:2 FTOH (A-1 and B-1), 8:2 FTOH (A-2 and B-2) and 10:2 FTOH (A-3 and B-3) in coating 4;
top (A): sample; bottom (B): sample + 2 ng/mL spike

Table S6 to S9 list PFAA and FTOH concentrations of MeOH as well as water extracts for building material samples and fabric samples. Bold font indicates detection.

Table S6: List of individual concentrations for all investigated building material samples and analyzed PFAAs, non-volatile and volatile precursors; resulting from methanol extracts

	PFAAs																				FTOHs									
	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoDS	4:2 FTS	6:2 FTS	8:2 FTS	PFOSA	8:2 FTCA	8:3 FTCA	7HPFHpA	PF37DMOA	6:2 FTOH	8:2 FTOH	10:2 FTOH	
LOQ [$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	2	2	2	5	2	2	2	2	40	40	40	
Sample																														
Coating 1-A ^I	39	53	360	430	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1700	n.d.	n.d.	
Coating 1-B	4	4.1	3.6	5.1	6.3	9.2	9.9	8.9	9.2	3.8	9.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	
Coating 2	4.7	<LOQ	24.73	<LOQ	<LOQ	<LOQ	<LOQ	n.d.	<LOQ	n.d.	<LOQ	n.d.	n.d.	n.d.	n.d.	<LOQ	n.d.	<LOQ	n.d.	<LOQ	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.30 ^a	0.161 ^b	0.094 ^b	
Coating 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.52 ^a	0.03 ^a	0.05 ^a	
Coating 4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.d.	n.d.	n.d.	
Coating 4-B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.d.	n.d.	n.d.	
Paint 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Paint 2 ^{II}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.
Paint 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.
Lacquer 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Lacquer 2 ^{III}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.e.	n.e.	n.d.	n.d.	n.d.	n.e.	n.e.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Stain	5.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE solar panel covering	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Foil for roofing (EPDM) 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Foil for roofing (EPDM) 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
OSBI ^{IV}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE for facades 1	30	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE for facades 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PTFE for facades 1	n.d.	n.d.	n.d.	n.d.	3.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PTFE for facades 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PE foil for packaging 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PE foil for packaging 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Sealant 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	230	310	n.d.
Sealant 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Wood glue	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

n.e. not evaluable, <LOQ below limit of quantification, n.d. not detected "—" MeOH extract not performed
^Idifferent LOQs (see Table S10; I), ^{II}Sample diluted 1:10; different LOQs (see Table S10; II), ^{III}different LOQs (see Table S10; III), ^{IV}different LOQs (see Table S10; IV)
^asample had to be diluted, conc. in [g L^{-1}], different LOQs (see Table S10); ^bsample had to be diluted, conc. in [mg L^{-1}], different LOQs (see Table S10)

Table S7: List of individual concentrations for all investigated building material samples and analyzed PFAS and non-volatile precursors; resulting from water extracts

	PFAAs																										
	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoDS	4:2 FTS	6:2 FTS	8:2 FTS	PFOSA	8:2 FTCA	8:3 FTCA	7HPFHpA	PF37DMOA	
LOQ [$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	2	2	2	5	2	2	2	2	
Sample																											
Coating 1-A	6.3	7.7	36	28.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Coating 1-B	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Coating 2 ^{VI} ; a	4.7	1	25	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Coating 3 ^{VII} ; a	n.d.	3.2	13	n.d.	1.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Coating 4-A ^{VIII} ; a	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Coating 4-B ^{VIII} ; a	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Paint 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Paint 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Paint 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Lacquer 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Lacquer 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Stain	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE solar panel covering	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Foil for roofing (EPDM) 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Foil for roofing (EPDM) 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
OSB	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE for facades 1	23.5	2.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ETFE for facades 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PTFE for facades 1	n.d.	n.d.	n.d.	n.d.	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PTFE for facades 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PE foil for packaging 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
PE foil for packaging 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Sealant 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Sealant 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Wood glue	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

n.e. not evaluable, <LOQ below limit of quantification, n.d. not detected

^{VI}directly enriched via SPE; different LOQ (see Table S10; VI), ^{VII}directly enriched via SPE; different LOQ (see Table S10; VII), ^{VIII}directly enriched via SPE; different LOQ (see Table S10; VIII)

^aConc. PFAAs in [$\mu\text{g L}^{-1}$]

Table S8: List of individual concentrations for all investigated fabric samples and analyzed PFAAs, non-volatile and volatile precursors; resulting from methanol extracts

	PFAAs																				FTOHs								
	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoDS	4:2 FTS	6:2 FTS	8:2 FTS	PFOSA	8:2 FTCA	8:3 FTCA	7HPFHpA	PF37DMOA	6:2 FTOH	8:2 FTOH	10:2 FTOH
LOQ [$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	2	2	2	5	2	2	2	2	40	40	40
Sample																													
Awning 1; marquee	2.8	2.4	16	5.1	130	4.1	71	n.d.	35	n.d.	21	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	220	2300	1600
Awning 2; marquee	2.7	2.4	12	5.0	62	3.1	35	n.d.	17	n.d.	7.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	220	2200	1600
Awning 3; marquee ^{IX}	4.3	3.0	18	2.6	4.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	200	510	720
Awning 4; marquee ^{IX}	2.4	n.d.	5.7	n.d.	3.8	n.d.	n.d.	n.e.	n.e.	n.e.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	140	140
Awning 5; marquee	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.
Awning 6; tent tarpaulin ^X	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning 7; tent tarpaulin ^X	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning 8; tent tarpaulin ^X	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning 9; tent tarpaulin ^X	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Furniture seat cover	2.7	2.2	4.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	690	n.d.	n.d.
Public transport seat cover 1 ^{XI}	n.d.	n.d.	n.d.	n.d.	6.0	n.d.	5.7	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	15	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 2 ^{XII}	n.d.	n.d.	n.d.	n.d.	2.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 3 ^{XIII}	n.d.	n.d.	n.d.	n.d.	2.0	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 4 ^{XIV}	n.d.	n.d.	n.d.	n.d.	10.5	n.d.	6.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.3	n.d.	n.d.	n.d.	n.d.	n.d.	26	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 5 ^{XV}	n.d.	n.d.	n.d.	n.d.	19	n.d.	15	n.d.	3.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	12	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 6 ^{XVI}	n.d.	n.d.	n.d.	n.d.	2.4	n.d.	n.d.	n.e.	n.e.	n.e.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	40	n.d.
Public transport seat cover 7 ^{XVII}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	90	70
Fabric for maritime applications 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	40	n.d.	n.d.
Fabric for maritime applications 3	n.d.	n.d.	n.d.	n.d.	2.6	n.d.	4.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	790	70	50
Truck trailer cover 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	260	n.d.	n.d.
Truck trailer cover 2 ^X	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Truck trailer cover 3 ^{XVIII}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

n.e. not evaluable, <LOQ below limit of quantification, n.d. not detected

^{IX}directly enriched via SPE; different LOQ (see Table S10; IX), ^Xdirectly enriched via SPE; different LOQ (see Table S10; X), ^{XI}directly enriched via SPE; different LOQ (see Table S10; XI), ^{XII}directly enriched via SPE; different LOQ (see Table S10; XII), ^{XIII}directly enriched via SPE; different LOQ (see Table S10; XIII), ^{XIV}directly enriched via SPE; different LOQ (see Table S10; XIV), ^{XV}directly enriched via SPE; different LOQ (see Table S10; XV), ^{XVI}directly enriched via SPE; different LOQ (see Table S10; XVI), ^{XVII}directly enriched via SPE; different LOQ (see Table S10; XVII), ^{XVIII}directly enriched via SPE; different LOQ (see Table S10; XVIII)

Table S9: List of individual concentrations for all investigated fabric samples and analyzed PFAS and non-volatile precursors; resulting from water extracts

	PFAAs																										
	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTtDA	PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoDS	4:2 FTS	6:2 FTS	8:2 FTS	PFOSA	8:2 FTCA	8:3 FTCA	7HPFHpA	PF37DMOA	
LOQ [$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	2	2	2	5	2	2	2	2	2
Sample																											
Awning; marquee 1	2.4	2.5	15	4.1	52	n.d.	7.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; marquee 2	2.3	2.4	11	4.2	36	n.d.	32	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; marquee 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; marquee 4 ^{XIX}	4.2	3.7	15	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; marquee 5 ^{XX}	n.d.	n.d.	2.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; tent tarpaulin 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; tent tarpaulin 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; tent tarpaulin 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Awning; tent tarpaulin 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Furniture seat cover	2.4	2.4	5.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 1 ^{XXI}	n.d.	n.d.	n.d.	5.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 2 ^{XXII}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 4 ^{XXII}	n.d.	n.d.	n.d.	n.d.	16	n.d.	8.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 5 ^{XXIII}	n.d.	n.d.	n.d.	n.d.	2.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Public transport seat cover 7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 1 ^{XXII}	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Car seat cover 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 1	n.d.	n.d.	n.d.	n.d.	2.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 2	n.d.	n.d.	n.d.	n.d.	2.6	n.d.	4.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Fabric for maritime applications 5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Truck trailer cover 1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.e.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Truck trailer cover 2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Truck trailer cover 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

n.e. not evaluable, <LOQ below limit of quantification, n.d. not detected

^{XIX}directly enriched via SPE; different LOQ (see Table S10; XIX), ^{XX}directly enriched via SPE; different LOQ (see Table S10; XX), ^{XXI}directly enriched via SPE; different LOQ (see Table S10; XXI), ^{XXII}directly enriched via SPE; different LOQ (see Table S10; XXII), ^{XXIII}directly enriched via SPE; different LOQ (see Table S10; XXIII)

Table S10: List of adjusted quantification limits

		PFAAs																				FTOHs									
		PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTTrDA	PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoDS	6:2 FTS	8:2 FTS	10:2 FTS	PFOSA	8:2 FTCA	8:3 FTCA	7HPFHpA	PF37DMOA	6:2 FTOH	8:2 FTOH	10:2 FTOH	
I	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	2	2	2	5	2	2	2	2	40	180	40	
II	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	10	2	2	2	2	2	2	5	5	2	2	5	2	2	2	2	40	40	40	
III	[$\mu\text{g kg}^{-1}$]	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	40	40	40	
IV	[$\mu\text{g kg}^{-1}$]	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	40	40	40	
V	PFAAs [$\mu\text{g L}^{-1}$]; FTOHs [$\mu\text{g kg}^{-1}$]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.1	1	1	0.5	0.1	0.1	200	40	40	
VI	PFAAs [$\mu\text{g L}^{-1}$]; FTOHs [$\mu\text{g kg}^{-1}$]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.1	1	1	0.5	0.1	0.1	-	-	-	
VII	PFAAs [$\mu\text{g L}^{-1}$]; FTOHs [$\mu\text{g kg}^{-1}$]	10	1	10	1	1	10	10	50	50	50	50	10	1	10	10	20	50	50	10	10	10	1	100	50	10	10	-	-	-	
VIII	PFAAs [$\mu\text{g L}^{-1}$]; FTOHs [$\mu\text{g kg}^{-1}$]	1	1	1	1	1	1	10	10	10	10	1	1	1	1	1	1	1	10	10	1	1	10	10	50	10	1	-	-	-	
IX	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	2	8	8	2	2	2	2	2	5	8	2	2	8	2	8	8	8	2	40	40	40	
X	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	2	8	8	2	2	2	2	2	5	2	2	2	8	8	8	8	8	2	40	40	40	
XI	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	8	8	8	2	2	2	8	2	5	8	2	5	8	2	8	8	8	2	160	40	40	
XII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	8	8	2	2	2	2	2	2	8	2	2	2	2	8	8	8	2	40	40	40	
XIII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	8	8	2	2	2	2	2	2	8	2	2	2	8	2	8	8	8	2	40	40	40
XIV	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	8	8	2	2	2	2	2	2	8	2	2	2	8	2	8	8	8	2	160	40	40
XV	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	2	2	2	2	2	2	2	2	2	2	2	2	8	2	8	8	8	2	40	40	40	
XVI	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	8	8	8	8	2	2	2	2	2	8	8	2	2	8	2	8	8	8	2	40	40	40	
XVII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	2	2	2	2	2	2	2	2	8	8	2	2	8	2	8	2	2	2	40	40	40	
XVIII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	5	8	8	8	2	2	2	2	2	5	8	2	2	8	8	8	8	8	2	40	40	40	
XIX	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	8	8	2	2	2	2	2	2	2	2	2	2	2	8	8	8	2	-	-	-	
XX	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	8	8	8	2	2	2	2	2	2	8	2	2	2	2	8	8	8	2	-	-	-	
XXI	[$\mu\text{g kg}^{-1}$]	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	8	8	-	-	-		
XXII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	8	8	-	-	-		
XXIII	[$\mu\text{g kg}^{-1}$]	2	2	2	2	2	2	2	2	2	2	2	2	2	8	2	2	2	2	2	2	2	2	8	8	8	-	-	-		
**	[g L^{-1}]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.0002	0.0002		
***	[mg L^{-1}]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.02	0.02

"-" not applicable

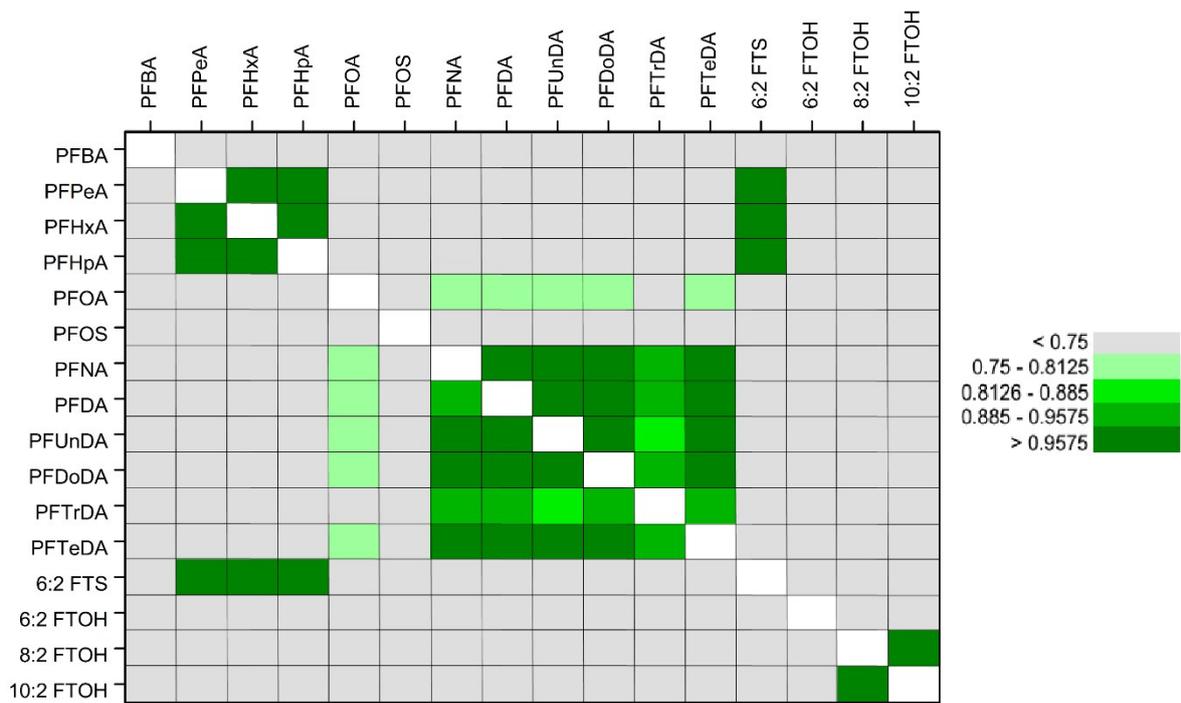


Figure S7: Heat map of PFAS pairing derived from R² values of scatterplots for building material samples

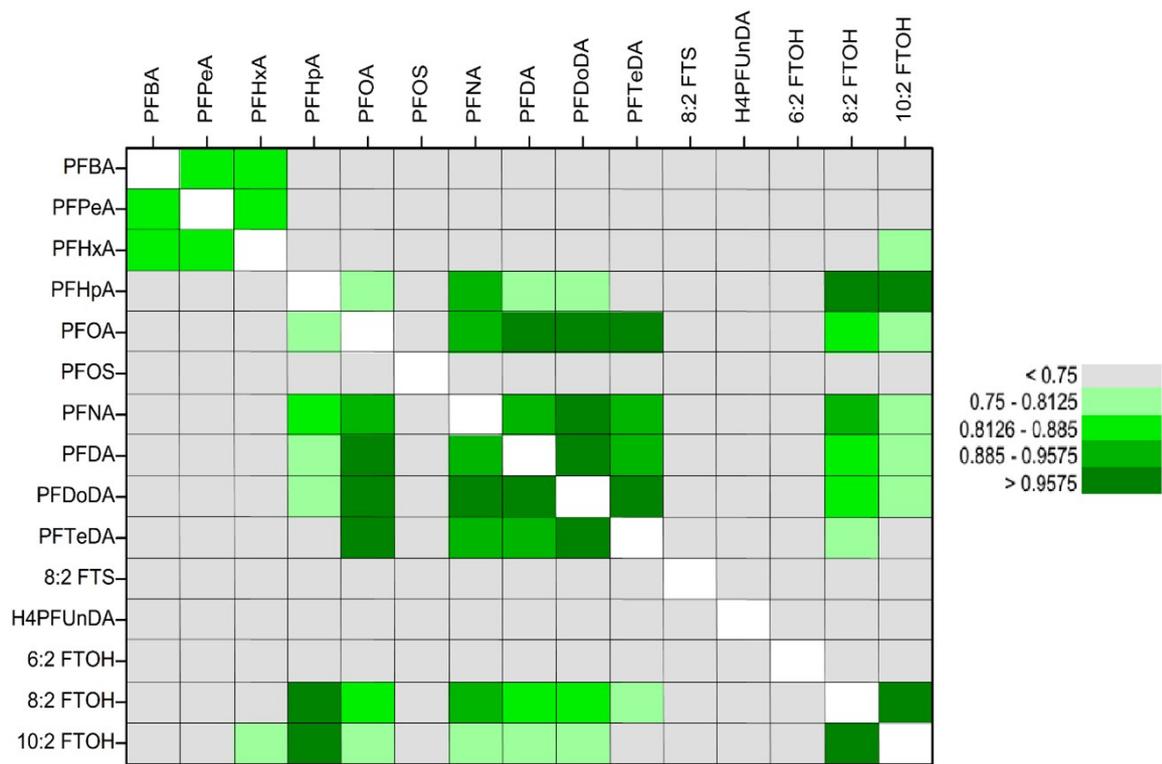


Figure S8: Heat map of PFAS pairing derived from R² values of scatterplots for fabric samples

Table S11: List of individual samples and corresponding arrival and analysis dates

Sample Type	Category	Number	Date of arrival	Date of analysis	
Building materials	Coating	1	23.02.2017	April 2017	
		2	28.02.2017	April 2017	
		3	20.02.2017	April 2017	
		4	16.02.2017	October 2017	
	Paint	1	13.10.2016	April 2017	
		2	09.02.2017	April 2017	
		3	03.03.2017	April 2017	
	Stain	1	09.02.2017	April 2017	
	Lacquer	1	09.02.2017	April 2017	
		2	09.02.2017	April 2017	
	OSB	1	09.02.2017	April 2017	
	Sealant	1	09.02.2017	April 2017	
		2	09.02.2017	April 2017	
	Wood glue	1	09.02.2017	April 2017	
	Foil (ETFE/PTFE for facades or glass-substituents)	1	12.12.2016	April 2017	
		2	12.12.2016	April 2017	
		3	12.12.2016	April 2017	
		4	12.12.2016	April 2017	
	Foil (PE for packaging of building materials)	1	31.10.2016	April 2017	
		2	31.10.2016	April 2017	
	Foil (Roofing material)	1	07.04.2017	April 2017	
		2	07.04.2017	April 2017	
	Foil (ETFE for solar panel cover)	1	27.03.2017	April 2017	
Fabric/Textile	Awning	1	02.06.2017	July 2017	
		2	02.06.2017	July 2017	
		3	22.03.2017	July 2017	
		4	22.03.2017	July 2017	
		5	02.03.2017	July 2017	
	Seat cover (public transport)	1	14.08.2017	September 2017	
		2	14.08.2017	September 2017	
		3	14.08.2017	September 2017	
		4	14.08.2017	September 2017	
		5	14.08.2017	September 2017	
		6	14.08.2017	September 2017	
	Maritime application	7	21.10.2016	July 2017	
		1	02.06.2017	July 2017	
		2	02.06.2017	July 2017	
		3	03.03.2017	July 2017	
		4	02.03.2017	July 2017	
	Seat cover (car)	5	02.03.2017	July 2017	
		1	28.02.2017	July 2017	
		2	28.02.2017	July 2017	
	Seat cover furniture	3	28.02.2017	July 2017	
		1	24.02.2017	July 2017	
	Fabric/Tarpaulins	Truck trailer cover	1	03.03.2017	July 2017
			2	22.11.2016	July 2017
3			22.11.2016	July 2017	
Tent Material		1	03.02.2017	July 2017	
		2	03.02.2017	July 2017	
		3	03.02.2017	July 2017	
		4	03.02.2017	July 2017	

Table S12: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, PFDA, PDUndA, PFDoDA, PFTrDA, PFTeDA

Category	Number	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnD	PFDoD	PFTrD	PFTeD
Coating	1-A	97	118	7	83	103	135	101	73	114	32	78
	1-B	98	108	100	109	129	132	84	65	129	56	111
	2	150	100	10	110	110	130	30	30	40	40	100
	3	59	71	69	65	64	87	74	46	62	70	62
	4-A	83	81	80	79	79	75	58	35	-	-	-
	4-B	100	112	108	108	98	112	106	52	116	104	96
Paint	1	107	114	117	112	108	147	125	74	78	121	102
	2	104	106	104	108	92	100	92	65	93	123	54
	3	95	100	116	109	98	119	87	72	104	92	90
Stain	1	111	108	114	109	139	117	111	61	96	31	124
Lacquer	1	97	113	104	110	95	120	95	63	75	261	108
	2	100	104	94	99	301	-	-	58	-	-	-
OSB	1	-	48	78	43	72	59	68	67	100	80	73
Sealant	1	124	132	135	136	120	149	124	84	130	46	101
	2	104	109	110	115	112	125	100	70	85	70	119
Wood glue	1	94	100	102	97	102	127	111	-	108	21	82
Foil (ETFE/PTFE for facades or glass-substituents)	1	62	71	67	73	77	62	64	79	72	50	73
	2	64	68	68	68	75	63	66	71	79	47	76
	3	65	67	71	67	81	65	58	68	77	56	76
	4	66	72	72	72	73	72	65	91	75	56	75
Foil (PE for packaging of building materials)	1	64	70	66	71	75	63	63	82	75	53	83
	2	64	70	69	68	74	60	70	70	75	57	66
Foil (Roofing material)	1	62	66	70	62	76	59	59	64	75	68	70
	2	62	67	68	68	73	72	50	80	80	88	58
Foil (ETFE for solar panel cover)	1	60	68	65	69	69	67	63	66	68	49	75
Awning	1	94	99	86	90	84	111	133	70	256	52	69
	2	87	97	95	92	82	106	111	56	109	55	102
	3	84	97	95	87	80	112	106	382	-	-	-
	4	91	96	92	90	84	103	82	51	98	37	103
	5	86	92	89	91	83	101	78	52	85	53	110
Seat cover (public transport)	1	76	76	99	92	124	111	80	81	24	120	43
	2	84	81	84	79	75	89	90	74	74	41	81
	3	74	78	75	82	83	84	79	79	83	3	66
	4	76	80	83	83	44	93	173	82	73	88	62
	5	76	76	84	78	89	75	94	75	71	66	77
	6	83	81	80	79	79	75	58	35	-	-	-
	7	87	95	97	93	85	109	85	55	101	85	101
Maritime application	1	124	106	103	96	94	119	95	53	82	46	95
	2	92	102	95	95	94	103	94	50	79	40	62
	3	91	97	94	85	86	106	94	55	83	50	53
	4	74	96	85	88	80	104	83	46	75	51	103
	5	91	93	105	95	89	108	84	57	88	91	101
Seat cover (car)	1	87	96	95	86	90	109	84	56	88	84	92
	2	86	98	100	92	86	109	86	54	56	121	97
	3	90	97	95	91	87	114	90	56	76	116	97
Seat cover furniture	1	87	97	92	92	93	113	93	55	89	75	97
Truck trailer cover	1	95	101	99	90	85	112	88	54	86	10	-
	2	93	100	98	99	84	115	90	62	83	333	106
	3	91	97	94	87	84	103	91	54	79	71	109
Tent Material	1	89	99	97	92	88	137	74	47	68	24	384
	2	91	98	99	92	91	135	90	81	90	26	102
	3	86	98	92	93	91	105	93	55	65	56	112
	4	90	94	91	86	86	116	72	41	96	183	164

“-“ not applicable

Table S13: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PFBS, PFPeS, PFHxS, PFHpS, PFOS, PFDS, PFDoS, 8:2 FTCA, 8:3 FTCA, 7HPFHpA

Category	Number	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFDoS	8:2 FTCA	8:3 FTCA	7HPFHpA
Coating	1-B	97	98	113	78	104	71	5	103	21	118
	1-A	87	107	102	88	105	145	14	50	152	126
	2	90	80	100	80	100	-	320	80	-	90
	3	62	70	62	60	56	63	59	67	114	66
	4-A	74	83	61	50	109	1	-	34	-	84
Paint	4-B	96	94	98	102	100	164	146	162	-	236
	1	94	90	98	89	123	193	121	61	137	93
	2	84	84	107	87	110	210	70	43	33	107
Stain	3	91	73	99	92	82	255	38	73	191	117
	1	91	147	113	42	132	17	9	360	28	117
Lacquer	1	82	104	102	90	108	-	135	60	74	107
	2	104	-	-	3	-	31	-	-	-	67
OSB	1	60	70	48	50	63	36	11	61	-	62
Sealant	1	116	123	134	91	126	42	4	43	215	122
	2	86	93	112	99	122	101	19	85	9	105
Wood glue	1	84	80	88	74	97	8	80	69	-	102
Foil (ETFE/PTFE for facades or glass-substituents)	1	64	52	63	56	63	44	17	67	15	61
	2	63	58	59	53	62	34	14	55	18	60
	3	60	61	64	54	62	44	19	48	45	60
	4	61	63	65	55	69	47	17	57	33	63
Foil (PE for packaging of building materials)	1	61	60	65	61	59	45	15	66	14	66
	2	62	52	68	56	66	46	14	63	21	61
Foil (Roofing material)	1	59	56	67	53	61	41	44	53	39	57
	2	61	54	63	55	56	38	111	67	-	59
Foil (ETFE for solar panel cover)	1	62	58	70	60	53	53	13	47	12	62
Awning	1	75	85	86	76	69	35	3	46	54	126
	2	71	90	84	89	80	38	5	48	43	120
	3	75	114	85	68	88	-	-	57	-	109
	4	71	104	88	88	67	23	4	61	19	109
	5	69	84	81	89	77	54	8	54	45	101
Seat cover (public transport)	1	73	72	92	45	71	90	28	38	12	66
	2	73	84	79	68	170	167	19	55	23	67
	3	71	111	78	71	87	50	-	141	-	123
	4	73	77	73	50	65	100	60	71	21	110
	5	76	77	78	46	64	97	68	73	9	79
	6	74	83	61	50	108	1	-	34	-	84
	7	74	87	88	77	64	35	19	49	83	105
Maritime application	1	88	90	93	81	80	36	5	79	8	195
	2	88	92	85	67	81	29	6	54	29	134
	3	74	85	87	96	73	62	19	50	17	104
	4	73	84	88	80	60	24	4	52	114	120
	5	73	89	86	90	70	63	18	42	44	112
Seat cover (car)	1	74	74	86	83	75	131	17	51	14	101
	2	71	87	88	91	76	132	36	44	47	100
	3	77	83	83	75	80	55	30	47	67	103
Seat cover furniture	1	72	83	91	87	83	71	21	43	98	104
Truck trailer cover	1	79	79	86	81	64	44	-	68	4	106
	2	78	87	86	93	75	153	91	54	27	117
	3	75	83	89	81	72	104	30	50	22	99
Tent Material	1	79	81	78	78	81	36	-	37	70	101
	2	79	73	83	83	73	32	-	55	87	91
	3	79	80	84	76	79	68	60	38	-	96
	4	74	81	87	87	69	262	67	45	53	139

“-“ not applicable

Table S14: Recovery levels of investigated samples in percent [%] resulting from spiking experiments after extraction and thus, referring to matrix effects; PF37DMOA, 4:2 FTS, 6:2 FTS, 8:2 FTS, 6:2 FTOH, 8:2 FTOH, 10:2 FTOH

Category	Number	PF37DMOA	4:2 FTS	6:2 FTS	8:2 FTS	6:2 FTOH	8:2 FTOH	10:2 FTOH	PFOSA
Coating	1-A	182	102	129	83	75	89	123	-
	1-B	98	99	128	100	72	87	94	124
	2	80	90	120	80	40	111	110	110
	3	95	63	70	75	-	93	104	49
	4-A	98	80	79	92	75	80	80	-
	4-B	116	104	110	110	97	97	125	104
Paint	1	90	95	120	89	85	140	97	105
	2	159	84	119	95	113	61	119	71
	3	38	76	153	86	53	-	102	98
Stain	1	239	94	124	91	39	78	139	115
Lacquer	1	-	85	118	86	97	122	122	81
	2	-	113	78	6	41	79	148	56
OSB	1	53	68	58	54	111	65	102	36
Sealant	1	141	129	175	139	57	97	103	89
	2	107	91	135	87	82	110	118	104
Wood glue	1	173	85	114	88	49	71	100	67
Foil (ETFE/PTFE for facades or glass-substituents)	1	53	61	74	79	164	158	217	68
	2	58	66	73	69	116	93	145	55
	3	49	67	71	71	109	86	136	45
	4	44	63	76	70	194	150	193	60
Foil (PE for packaging of building materials)	1	54	70	68	71	187	146	181	70
	2	51	68	74	87	125	81	129	61
Foil (Roofing material)	1	47	70	66	60	139	105	131	15
	2	70	61	65	68	201	159	256	-
Foil (ETFE for solar panel cover)	1	59	65	67	69	165	135	147	63
Awning	1	118	64	141	54	93	90	164	99
	2	112	64	132	61	95	100	110	111
	3	-	69	116	41	120	70	135	90
	4	109	64	138	59	95	75	140	109
	5	124	65	128	54	99	101	107	105
Seat cover (public transport)	1	93	87	40	150	90	80	100	98
	2	70	83	81	110	81	88	110	65
	3	102	86	75	142	85	115	200	70
	4	82	86	73	130	69	94	123	77
	5	115	86	100	142	75	115	150	70
	6	98	80	79	92	96	100	95	54
	7	107	67	124	51	97	76	120	112
Maritime application	1	94	73	149	49	65	79	140	77
	2	101	67	131	58	80	115	155	103
	3	114	61	122	56	145	80	125	138
	4	104	63	127	48	94	77	135	121
	5	90	67	123	56	135	125	210	82
Seat cover (car)	1	142	65	123	45	160	100	120	103
	2	159	65	125	70	97	98	141	98
	3	95	67	128	57	140	95	150	163
Seat cover furniture	1	106	68	130	53	95	85	110	102
Truck trailer cover	1	123	69	128	54	65	73	146	-
	2	105	67	138	42	96	82	168	-
	3	175	67	128	38	145	112	310	9
Tent Material	1	78	75	133	50	82	78	150	120
	2	99	65	120	67	140	110	155	112
	3	145	62	134	37	84	77	154	84
	4	97	68	121	61	145	90	230	-

“-“ not applicable

Table S15: Recoveries and RSD values of experiments showing extraction efficiency over multiple extractions (n=3) for three representative samples as methanol extracts and two representative samples as water extracts and a comparison of matrix effects and method recoveries (prior vs. post extraction spike) as methanol extracts of three samples; samples were spiked prior to extraction (H₂O extracts) or prior and post extraction (methanol extracts)

		Awning 2				Awning 4				Foil 2			
		Sample + 8 µg/kg prior		Sample + 8 µg/kg post		Sample + 8 µg/kg prior		Sample + 8 µg/kg post		Sample + 8 µg/kg prior		Sample + 8 µg/kg post	
		Recovery [%]	RSD [%]	Recovery [%]	RSD [%]	Recovery [%]	RSD [%]	Recovery [%]	RSD [%]	Recovery [%]	RSD [%]	Recovery [%]	RSD [%]
MeOH extract	PFBA	105.6	0.6	104.6	1.8	102.2	2.1	107.6	1.5	103.4	3.2	102.7	1.3
	PFBS	125.3	3.4	128.3	4.5	127.2	5.6	124.5	2.0	122.3	9.1	124.5	2.4
	PFPeA	119.5	2.5	120.3	4.8	118.6	6.5	121.2	2.0	122.1	1.9	118.6	2.0
	PFPeS	100.4	3.2	97.1	4.1	99.0	3.6	110.0	9.5	94.2	3.6	95.9	2.6
	PFHxA	122.2	35.4	103.3	7.7	106.7	18.6	102.9	1.2	104.5	2.4	104.0	2.4
	PFHxS	95.8	5.8	91.5	3.9	97.8	5.5	100.0	3.5	89.4	5.5	91.8	5.8
	PFHpA	105.0	6.4	99.6	4.1	97.0	10.0	99.5	3.8	105.7	2.4	102.0	2.2
	PFHpS	60.1	8.3	56.3	2.4	64.9	4.7	71.2	8.8	79.0	3.0	81.0	4.3
	PFOA	-	n.e.	156.5	n.e.	-	n.e.	149.4	28.7	102.8	0.4	94.8	3.3
	PFOS	102.3	8.0	84.7	2.2	95.6	3.7	87.3	7.8	94.5	3.9	83.9	6.1
	PFOSA	91.3	11.7	95.7	6.0	84.6	6.7	86.3	14.4	85.8	4.3	85.8	14.8
	PFNA	102.8	3.9	105.0	12.6	92.0	12.7	105.4	9.9	101.6	5.4	98.4	6.1
	PFDA	177.2	n.e.	-	n.e.	99.5	30.0	133.8	13.0	93.9	8.0	97.6	2.9
	PFDS	25.3	21.2	28.7	20.2	21.6	13.4	19.8	24.0	39.3	9.8	46.9	5.8
	PFUnDA	100.0	15.0	96.8	2.4	107.4	11.6	106.9	3.0	102.1	4.7	99.9	7.2
	PFDoDA	-	n.e.	82.8	n.e.	-	12.9	107.8	48.3	96.7	3.4	100.8	10.6
	PFDoDS	-	n.e.	6.3	58.1	n.e.	n.e.	n.e.	n.e.	5.5	51.8	3.8	14.2
	PFTrDA	39.6	50.6	36.3	18.6	28.0	47.1	-	n.e.	35.9	16.1	38.1	21.6
	PFTeDA	-	42.7	113.4	57.5	148.9	60.2	152.1	45.1	114.8	7.5	118.3	4.2
	7HPFHpA	147.6	1.1	146.3	1.2	137.8	1.2	139.1	1.8	130.0	7.4	128.6	3.8
PF37DMOA	167.7	4.3	162.6	1.7	163.8	1.7	166.7	7.0	102.0	2.4	109.0	2.4	
4:2FTS	115.5	3.5	111.6	4.4	115.4	3.6	111.5	3.8	112.1	5.0	108.7	6.9	
6:2FTS	119.0	5.1	111.7	4.4	108.2	2.9	109.5	0.3	117.6	6.1	111.6	5.2	
8:2FTS	104.7	5.3	107.5	11.2	102.2	2.7	98.3	5.3	97.6	2.0	96.2	4.2	
8:2FTCA	146.9	7.8	135.1	1.6	-	21.1	-	n.e.	99.2	2.5	108.9	1.6	
8:3FTCA	30.8	37.9	-	3.5	47.7	45.7	45.9	31.8	53.2	27.3	71.7	44.5	
H2O extract	PFBA	n.s.	n.s.	n.s.	n.s.	60.7	11.6	n.s.	n.s.	111.2	8.8	n.s.	n.s.
	PFBS	n.s.	n.s.	n.s.	n.s.	43.4	6.0	n.s.	n.s.	130.3	3.4	n.s.	n.s.
	PFPeA	n.s.	n.s.	n.s.	n.s.	64.3	6.4	n.s.	n.s.	124.3	0.6	n.s.	n.s.
	PFPeS	n.s.	n.s.	n.s.	n.s.	27.9	7.2	n.s.	n.s.	96.2	5.6	n.s.	n.s.
	PFHxA	n.s.	n.s.	n.s.	n.s.	82.2	28.2	n.s.	n.s.	104.5	1.0	n.s.	n.s.
	PFHxS	n.s.	n.s.	n.s.	n.s.	18.8	10.5	n.s.	n.s.	93.1	2.9	n.s.	n.s.
	PFHpA	n.s.	n.s.	n.s.	n.s.	48.9	15.3	n.s.	n.s.	105.1	3.4	n.s.	n.s.
	PFHpS	n.s.	n.s.	n.s.	n.s.	-	2.3	n.s.	n.s.	84.2	2.8	n.s.	n.s.
	PFOA	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	98.7	3.5	n.s.	n.s.
	PFOS	n.s.	n.s.	n.s.	n.s.	-	n.e.	n.s.	n.s.	83.1	0.8	n.s.	n.s.
	PFOSA	n.s.	n.s.	n.s.	n.s.	-	48.5	n.s.	n.s.	36.2	4.2	n.s.	n.s.
	PFNA	n.s.	n.s.	n.s.	n.s.	-	9.2	n.s.	n.s.	97.4	2.4	n.s.	n.s.
	PFDA	n.s.	n.s.	n.s.	n.s.	-	n.e.	n.s.	n.s.	87.7	1.8	n.s.	n.s.
	PFDS	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	41.7	8.0	n.s.	n.s.
	PFUnDA	n.s.	n.s.	n.s.	n.s.	-	27.8	n.s.	n.s.	75.3	7.2	n.s.	n.s.
PFDoDA	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	45.3	7.6	n.s.	n.s.	

	PFD _o DS	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.
	PFT _r DA	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.
	PFT _e DA	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.
	7HPFH _p A	n.s.	n.s.	n.s.	n.s.	60.1	0.6	n.s.	n.s.	134.9	2.8	n.s.	n.s.
	PF37DMOA	n.s.	n.s.	n.s.	n.s.	27.2	8.2	n.s.	n.s.	126.6	5.5	n.s.	n.s.
	4:2F _T S	n.s.	n.s.	n.s.	n.s.	46.5	5.7	n.s.	n.s.	110.1	4.0	n.s.	n.s.
	6:2F _T S	n.s.	n.s.	n.s.	n.s.	31.8	10.3	n.s.	n.s.	111.2	3.2	n.s.	n.s.
	8:2F _T S	n.s.	n.s.	n.s.	n.s.	-	9.6	n.s.	n.s.	95.2	0.8	n.s.	n.s.
	8:2F _T CA	n.s.	n.s.	n.s.	n.s.	-	57.6	n.s.	n.s.	151.4	6.8	n.s.	n.s.
	8:3F _T CA	n.s.	n.s.	n.s.	n.s.	n.e.	n.e.	n.s.	n.s.	36.9	7.2	n.s.	n.s.

n.s. no sample

n.e. not evaluable

**- High PFAA concentration; spiked level was not appropriate

Table S16: Recoveries and RSD values of experiments showing extraction efficiency over multiple direct measurements (n=3) for one representative sample; samples were spiked prior to direct measurement

		Coating 3	
		Sample + 8 µg/kg prior	
		Recovery [%]	RSD [%]
Direct measurement without extraction	PFBA	105.6	0.6
	PFBS	125.3	3.4
	PFPeA	119.5	2.5
	PFPeS	100.4	3.2
	PFHxA	122.2	35.4
	PFHxS	95.8	5.8
	PFHpA	105.0	6.4
	PFHpS	60.1	8.3
	PFOA	-	2.7
	PFOS	102.3	8.0
	PFOSA	91.3	11.7
	PFNA	102.8	3.9
	PFDA	-	7.5
	PFDS	25.3	21.2
	PFUnDA	100.0	15.0
	PFDoDA	-	8.1
	PFDoDS	5.2	64.4
	PFTTrDA	39.6	50.6
	PFTeDA	-	1.6
	7HPFHpA	147.6	1.1
PF37DMOA	167.7	4.3	
4:2FTS	115.5	3.5	
6:2FTS	119.0	5.1	
8:2FTS	104.7	5.3	
8:2FTCA	146.9	7.8	
8:3FTCA	30.8	37.9	

n.e. not evaluable
 -: High PFAA concentration; spiked level was not appropriate

Table S17: Blanks across the whole extraction procedure (empty tube), showing blank concentrations and extraction efficiency from empty PP tubes that were spiked prior to extraction as well as corresponding recoveries

	H ₂ O extract			Methanol extract		
	Empty tube	Empty tube + 8 µg/kg prior to extraction (corresponding to 1g sample)		Empty tube	Empty tube + 8 µg/kg prior to extraction (corresponding to 1g sample)	
	Concentration [µg/kg]	Concentration [µg/kg]	Recovery [%]	Concentration [µg/kg]	Concentration [µg/kg]	Recovery [%]
PFBA	n.d.	8.217	102.7	n.d.	8.414	105.2
PFBS	n.d.	9.707	121.3	n.d.	9.009	112.6
PFPeA	n.d.	9.889	123.6	n.d.	9.343	116.8
PFPeS	n.d.	7.706	96.3	n.d.	7.944	99.3
PFHxA	n.d.	8.335	104.1	n.d.	8.032	100.4
PFHxS	0.019	7.4	92.2	0.049	7.221	89.7
PFHpA	n.d.	8.08	101.0	n.d.	7.766	97.1
PFHpS	n.d.	6.085	76.0	n.d.	6.492	81.2
PFOA	n.d.	7.773	97.2	0.051	7.508	93.2
PFOS	n.d.	5.725	71.6	n.d.	7.754	96.9
PFOSA	n.d.	3.054	38.2	n.d.	6.725	84.1
PFNA	n.d.	8.129	101.6	n.d.	7.733	96.7
PFDA	n.d.	6.238	78.0	n.d.	7.17	89.6
PFDS	n.d.	1.776	22.2	n.d.	3.278	41.0
PFUnDA	n.d.	4.015	50.2	n.d.	7.841	98.0
PFDoDA	n.d.	2.079	26.0	n.d.	7.493	93.7
PFDoDS	n.d.	n.e.	n.e.	n.d.	n.e.	n.e.
PFTTrDA	n.d.	n.e.	n.e.	n.d.	n.e.	n.e.
PFTeDA	n.d.	n.e.	n.e.	n.d.	9.149	114.4
7HPFHpA	n.d.	10.224	127.8	n.d.	9.708	121.4
PF37DMOA	n.d.	10.183	127.2	n.d.	9.231	115.4
4:2FTS	n.d.	8.373	104.6	n.d.	8.355	104.4
6:2FTS	n.d.	8.439	105.5	n.d.	8.878	111.0
8:2FTS	n.d.	7.134	89.2	n.d.	7.803	97.5
8:2FTCA	n.d.	11.712	146.4	n.d.	11.21	140.1
8:3FTCA	n.d.	3.072	38.4	n.d.	5.35	66.9

n.e. not evaluable
n.d. not detected

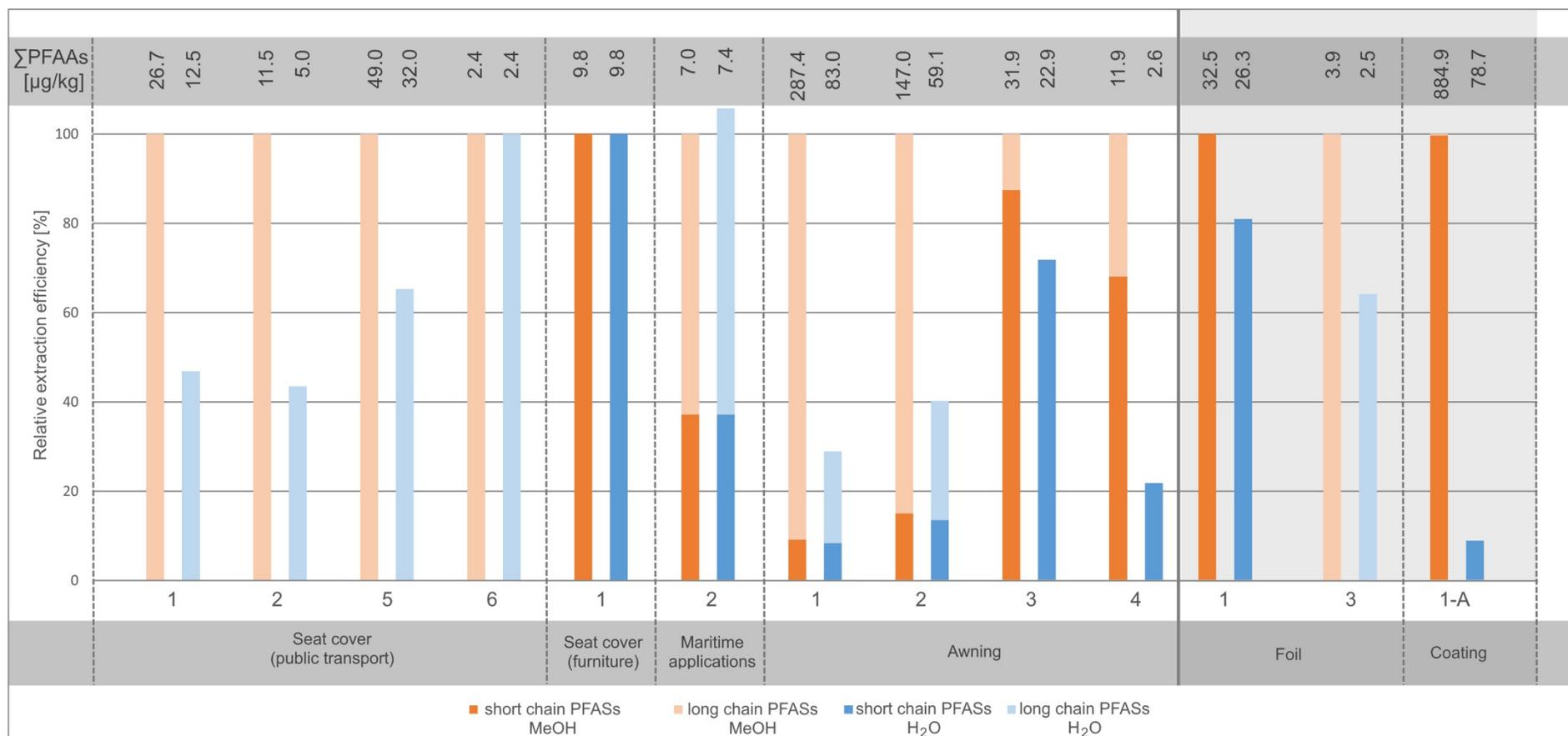


Figure S9: Comparison of relative extraction efficiencies of methanol and water extracts with the differentiation of long chain and short chain PFASs and corresponding ΣPFASs