

Supplementary data for

Snapshot Survey of the Presence of Perfluoroalkyl Substances in Products, Articles, and the Environment in Ecuador

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Table S 1: Samples analyzed. Blue letters indicate the English description from the original description in Spanish

Code	State	Type	Sample	Description	Brand	Made in	Year manufacture
COP_001	liquid	Fire fighting	FF_Chemguard(2013)	Espuma contra incendio (fire fighting foam)	Chemguard	USA	2013
COP_002	liquid	Fire fighting	FF_Buckeye	Espuma contra incendio (fire fighting foam)	Buckeye	USA	2015
COP_003	liquid	Metal plating	Liquid metal plating	Líquido de galvanizado (liquid for metal plating)	ND	ND	
COP_004	liquid	Degreaser	Degreaser_basic	Líquido de desengrase básico (basic degreasing liquid)	ND	ND	
COP_005	liquid	Metal plating	Liquid metal plating Cr	Líquido de cromatizado (liquid for metal plating)	ND	ND	
COP_006	solid	Plastic	HDPE	Polietileno de alta densidad HDPE (High density polyethylene)	ND	ND	
COP_008	solid	Plastic	PVC tube	PVC perfil tubular (PVC tubular track)	ND	ND	
COP_013	liquid	Fire fighting	FF_Ansulite	Espuma contra incendio (fire fighting foam)	Ansulite	USA	2016
COP_014	liquid	Fire fighting	FF_Chemguard fluoroprotein	Espuma contra incendio (fire fighting foam)	Chemguard	USA	2014
COP_015	liquid	Fire fighting	FF_Chemguard AR	Espuma contra incendio (fire fighting foam)	Chemguard	USA	2014
COP_016	liquid	Coolant	Coolant_coldfire	Líquido refrigerante (coolant)	Coldfire	USA	
COP_017	liquid	Water	Water_River Teaone	Agua del río Teaone (Teaone river water sample)		Ecuador	
COP_019	liquid	Oil greaser additives	Chem driven oil drilling_Dorf Ketal	Líquido de refinación (Chemically driven oil refining)	Dorf Ketal	India	
COP_020	liquid	Metal plating	Degreaser metal plating_Grasol	Líquido de desengrase de galvanoplastia (degreasing liquid for metal plating)	Grasol	Ecuador	
COP_024	liquid	Degreaser	Degreaser_M	Líquido desengrasante (degreasing liquid)	Degreasser M	Ecuador	
COP_025	liquid	Water	Water_River Guayas	Agua del río Guayas (Guayas river water sample)		Ecuador	
COP_026	solid	Paper carton	Popcorn bag	Bolsa de palomitas para microondas (popcorn bag)	Planet POP	Colombia	
COP_027	solid	Carpet leather	Carpet_HomeClub	Alfombra (carpet)	Home Club	China	
COP_029	liquid	Photographic aid	Photographic fixation_Simon	Fijador de fotografía (fixative for photographic use)	Simon	USA	
COP_031	solid	Plastic	Plastic fiber Mainboard	Fibra plástica de mainboard (mainboard plastic fiber)	ND		
COP_035	liquid	Photographic aid	Photo developer_Simon	Líquido revelador de fotografía (developer for photographic use)	Simon	USA	
COP_037	liquid	Oil greaser additives	Leather greaser_Smit	Líquido engrasante de cuero (leather treatment-greaser)	Smit	Holanda	2020
COP_038	liquid	Oil greaser additives	Leather greaser_Smit&Zoom	Líquido engrasante de cuero (leather treatment-greaser)	Smit&Zoon	Holanda	2019
COP_040	solid	Carpet leather	Leather finished	Cuero terminado (finished leather)			2021
COP_041	liquid	Aviation hydraulic fluid	Aviation hydr fluid_H4Jet	Fluido hidráulico de aviación (Hydraulic fluid-aviation)	H4Jet		
COP_042	liquid	Aviation hydraulic fluid	Aviation hydr fluid_Skydrol	Fluido hidráulico de aviación (Hydraulic fluid-aviation)	Skydrol		
COP_043	liquid	Aviation hydraulic fluid	Aviation hydr fluid_Mobil	Fluido hidráulico de aviación (Hydraulic fluid-aviation)	Mobil		

Code	State	Type	Sample	Description	Brand	Made in	Year manufacture
COP_053	liquid	Water	Water_River Guayllamba	Agua del río Guayllabamba (Guayllabamba river water sample)		Ecuador	
COP_054	liquid	Fire fighting	FF_Ansulite	Espuma contra incendio (fire fighting foam)	Ansulite	USA	2008
COP_055	liquid	Fire fighting	FF_Mezcla(mix)	Espuma contra incendio (fire fighting foam)	Mezcla	NA	2008-2017
COP_056	liquid	Leather treatment	Leather treatment_Codyeco	Líquido engrasante de cuero (leather treatment-greaser)	Codyeco		
COP_058	solid	Carpet leather	Leather upholstery	Cuero para Tapicería (leather for upholstery)			
COP_060	liquid	Water	Water_River Machángara	Agua del río Machángara (Machángara river water sample)		Ecuador	
COP_061	solid	Paper carton	Carton waxed	Cartón encerado (waxed carton)			2021
COP_065	solid	Plastic	PVC waste	Residuos de PVC (PVC waste)	Electrocables	Ecuador	2021
COP_069	solid	Photographic aid	Photographic developer_Fotoquim	Sales para preparar fijador de fotografía (developer for photographic use)	Fotoquim		
COP_070	solid	Pesticide	Antkiller_Attakill	Mata hormigas (ant killer)	Atta-Kill (sulfluramida)		
COP_071	liquid	Cleaner	Cleaner_Klinkar	Líquido limpiador (cleaning)	Klinkar		
COP_073	liquid	Degreaser	Degreaser_prof_H7	Desengrasante profesional (degreasing)	H7	USA	10/2/2020
COP_074	liquid	Degreaser	Degreaser_hands_Weir	Desengrasante de manos (hands degreasing)	Weir	Ecuador	12/11/2019
COP_075	solid	Degreaser	Degreaser_Gunk	Wipes desengrasantes (degreasing)	Gunk	USA	2018
COP_076	liquid	Paint	Paint anticorrosive_UNIDAS	Pintura anticorrosiva negra (black anticorrosive paint)	UNIDAS	Ecuador	Aug-20
COP_077	semi-solid	Oil greaser additives	Greaser_EP2 Chevron	Grasa EP2 marca (EP2 grease)	Chevron	USA	
COP_078	liquid	Water	Drinking water	Agua potable (drink water)		Ecuador	
COP_080	liquid	Oil greaser additives	Anticorrosive_oil_Starret	Aceite anticorrosivo (anticorrosive oil)	Starrett M1	Brasil	Dec-19
COP_083	solid	Paper carton	Paper waxed_reynolds	Papel encerado (waxed paper)	Reynolds	USA	
COP_084	solid	Paper carton	Paper baking_FreeHome	Papel para hornear (paper for baking)	Free Home	China	
COP_085	semi-solid	Pesticide	Antkiller_Klerax	Matahormigas gel (ant kiler-gel)	Klerat (Thiametoxam)	Brasil	Jul-20
COP_086	semi-solid	Waxes polishers	Shoe polish_Express	Betún en crema (shoe polish)	Express	Colombia	
COP_087	liquid	Oil greaser additives	Brake fluid_Motorex	Líquido de frenos (brake fluid)	Motorex	Ecuador	2/23/2018
COP_088	semi-solid	Waxes polishers	Car wax_Klinkar	Cera pulidora para auto (automotive wax)	Klinkar	Perú	
COP_089	semi-solid	Waxes polishers	Car wax_Simoniz	Cera pulidora para auto (automotive wax)	Simoniz	Colombia	2/4/2021
COP_090	liquid	Oil greaser additives	Motorcycle_oil_76Lubricants	Aceite de motocicleta (motorcycle oil)	76 Lubricants	USA	

Code	State	Type	Sample	Description	Brand	Made in	Year manufacture
COP_091	liquid	Waxes polishers	Floor wax_Virginia	Cera de pisos (floor wax)	Virginia	Chile	12/2/2020
COP_092	liquid	Cleaner	Cleaner interior_FreshCar	Limpiador de interiores (cleaning)	Fresh Car	Ecuador	10/5/2020
COP_093	liquid	Cleaner	Car shampoo_Simoniz	Shampoo para auto (automotive shampoo)	Simoniz	Colombia	
COP_094	liquid	Leather treatment	Cleaner leather_Simoniz	Limpiador de cuero (leather cleaning)	Simoniz	Colombia	
COP_096	liquid	Degreaser	Degreaser kitchen_Johnson	Desengrasante para cocina (degreasing for kitchens)	Johnson	Colombia	12/17/2020
COP_097	solid	Cleaner	Dishwash_Cascade	Lavavajillas (dishwasher)	Cascade	USA	
COP_101	solid	Wire	Electric wire_Ace	Cable eléctrico (electric wire)	Ace	Indonesia	2018
COP_102	solid	Wire	Electric wire_Cablec	Cable eléctrico (electric wire)	General cable Cablec		
COP_104	solid	Plastic	Silicone seat	Asiento de silicona (silicone seat)	Chef Craft	China	
COP_105	solid	Fabric	Fabric antilfluid	Tela antilfluid (antilfluid fabric)		China	
COP_106	solid	Fabric	Fabric waterproof	Tela impermeable (waterproof fabric)		Ecuador	
COP_107	solid	Fabric	Fabric sporting	Tela deportiva (sporting fabric)		Ecuador	
COP_109	solid	Carpet leather	Carpet_FreeHome	Alfombra (carpet)	Free Home	China	
COP_113	solid	Carpet leather	Carpet_StarHome	Alfombra (carpet)	Star Home	China	Jan-21
COP_115	solid	Paper carton	Pizza carton	Caja de pizza (Pizza box)	PizzaHut		
COP_116	solid	Paper carton	Hamburger box	Caja de hamburguesa (hamburger box)	McDonald		2018
COP_117	solid	Paper carton	Paper waxed	Papel encerado (waxed paper)	KFC		
COP_120	solid	Fabric	Fabric umbrella	Tela impermeable de paraguas (Umbrella waterproof fabric)	JW001		
COP_122	solid	Carpet leather	Carpet_Stylo	Alfombra (carpet)	STYLO	China	2020
COP_123	solid	Paper carton	Carbonless paper	Papel autocopia (carbonless paper)			
COP_124	solid	Carpet leather	Carpet_Boyoyou	Alfombra (carpet)	Bo you you	China	2020
COP_blank1	solid	Blank	HDPE bottle	Blanco (plastic bottle)			
COP_blank2	solid	Blank	HDPE bottle	Blanco (plastic bottle)			

Table S 2: List of PFAS analyzed in this study (native standard)

PFAS Stockholm Convention		Perfluorosulfonic acids (PFSA)		Perfluorocarboxylic acids (PFCA)	
PFOS	Perfluorooctane sulfonic acid	PFBS	Perfluorobutane sulfonic acid	PFBA	Perfluorobutanoic acid
PFOA	Perfluorooctanoic acid	PFPeS	Perfluoropentane sulfonic acid	PFPeA	Perfluoropentanoic acid
PFHxS	Perfluorohexane sulfonic acid	PFHpS	Perfluoroheptane sulfonic acid	PFHxA	Perfluorohexanoic acid
PFOS precursors		PFNS	Perfluorononane sulfonic acid	PFHpA	Perfluorobutanoic acid
FOSA	Perfluorooctane sulfonamide	PFDS	Perfluorodecane sulfonic acid	PFNA	Perfluorononanoic acid
NMeFOSA	N-methyl fluorooctane sulfonamide	PFDoDS	Perfluorododecane sulfonic acid	PFDA	Perfluorodecanoic acid
NEtFOSA	N-ethyl fluorooctane sulfonamide	Fluorotelomer sulfonic acids		PFUnDA	Perfluoroundecanoic acid
NMeFOSE	N-methyl fluorooctane sulfonamidoethanol	FTSA_4_2	4:2 Fluorotelomer sulfonic acid	PFDoDA	Perfluorododecanoic acid
NEtFOSE	N-ethyl fluorooctane sulfonamidoethanol	FTSA_6_2	6:2 Fluorotelomer sulfonic acid	PFTTrDA	Perfluorotridecanoic acid
		FTSA_8_2	8:2 Fluorotelomer sulfonic acid	PFTDA	Perfluorobutanoic acid
				PFHxDA	Perfluorobutanoic acid
				PFOcDA	Perfluorobutanoic acid

In addition, paper samples were analyzed for 3:3 FTCA, 5:3 FTCA, 6:2 FTUCA, 7:3 FTCA, 8:2 FTUCA

Table S 3: Results for water samples. The number after "<" represents the LOQ

State	liquid	liquid	liquid	liquid	liquid
Type	Water	Water	Water	Water	Water
Sample	Water_River Teaone	Water_River Guayas	Water_River Guayllamba	Water_River Machángara	Drinking water
Code	COP_017	COP_025	COP_053	COP_060	COP_078
Unit	ng/L	ng/L	ng/L	ng/L	ng/L
L-PFOS	0.425	0.200	0.163	0.156	0.010
br-PFOS	0.183	0.085	0.089	0.055	0.010
Sum PFOS	0.608	0.285	0.252	0.211	0.020
PFOA	3.92	1.56	1.34	4.95	0.068
PFHxS	0.192	0.083	0.106	0.174	0.023
FOSA	<0.025	<0.025	<0.025	<0.025	<0.025
PFBS	0.189	0.063	0.241	0.213	0.032
PFDS	<0.025	<0.025	<0.025	<0.025	<0.025
PFBA	7.29	7.76	3.38	13.5	<0.025
PFPeA	43.0	46.3	9.05	81.6	<0.025
PFHxA	36.6	54.3	8.49	74.8	<0.025
PFHpA	25.5	4.23	1.42	128	0.030
PFNA	3.20	0.442	0.288	4.71	0.010
PFDA	1.16	0.173	0.206	0.426	0.019
PFUnDA	0.844	0.171	0.051	0.888	0.020
PFDoDA	0.415	0.108	<0.025	<0.025	<0.025
PFTTrDA	<0.025	<0.025	<0.025	<0.025	<0.025
PFTDA	<0.025	<0.025	<0.025	<0.025	<0.025
6_2_FTSA	232	211	42.9	227	0.193
NMeFOSA, NEtFOSA, NMeFOSE, NEtFOSE, PFPeS, PFHpS, PFNS, PFDoDS, PFHxDA, PFOcDA, and 4_2_FTSA were not analyzed in these samples					

Table S 4: Results for pesticides samples . The number after “<” represents the LOQ

State	solid	semi-solid
Sample	Antkiller_Attakill	Antkiller_Klerax
Code	COP_070	COP_085
Unit	µg/kg	µg/L
L-PFOS	<50	<50
br-PFOS	<50	<50
Sum PFOS	<50	<50
PFOA	<50	<50
PFHxS	<50	<50
FOSA	<50	<50
NMeFOSA	<50	<50
NEtFOSA	150000	<50
NMeFOSE and NEtFOSE were not analyzed in these samples		
The following PFAS had values below the LOQ of 50 µg/kg or 50 µg/L: PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, 4_2_FTSA, 6_2_FTSA, and 8_2_FTSA		

Table S 5: Results for metal plating. The number after “<” represents the LOQ

State	liquid	liquid	liquid
Sample	Liquid metal plating	Liquid metal plating Cr	Degreaser metal plating_Grasol
Code	COP_003	COP_005	COP_020
Unit	µg/L	µg/L	µg/L
L-PFOS	<50	<50	<50
br-PFOS	<50	<50	<50
Sum PFOS	<50	<50	<50
PFOA	<50	<50	<50
PFHxS	<50	<50	<50
NMeFOSE and NEtFOSE were not analyzed in these samples			
The following PFAS had values below the LOQ of 50 µg/L: FOSA, NMeFOSA, NEtFOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, 4_2_FTSA, 6_2_FTSA, 8_2_FTSA			

Table S 6: Results for aviation hydraulic fluids. The number after "<" represents the LOQ

Physical state	liquid	liquid	liquid
Sample	Aviation hydr fluid_H4Jet	Aviation hydr fluid_Skydrol	Aviation hydr fluid_Mobil
Code	COP_041	COP_042	COP_043
Unit	µg/L	µg/L	µg/L
L-PFOS	<50	<50	<50
br-PFOS	<50	<50	<50
Sum PFOS	<50	<50	<50
PFOA	<50	<50	<50
PFHxS	<50	<50	<50
NMeFOSE and NEtFOSE were not analyzed in these samples			
The following PFAS had values below the LOQ of 50 µg/L: FOSA, NMeFOSA, NEtFOSA; PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, 4_2_FTSA, 6_2_FTSA, 8_2_FTSA			

Table S 7: Results for photographic aid samples. The number after “<” represents the LOQ;
NR = not reported
*Note: Sample COP_069 could not be dissolved in any of the solvents and therefore, maybe underestimated

State	liquid	liquid	solid
Sample	Photographic fixation_Simon	Photo developer_Simon	Photographic developer_Fotoquim
Code	COP_029	COP_035	COP_069*
Unit	µg/L	µg/L	ng/g
L-PFOS	<50	<50	NR
br-PFOS	<50	<50	NR
Sum PFOS	<50	<50	NR
PFOA	<50	<50	NR
PFHxS	<50	<50	NR
PFPeA	<50	NR	NR
NMeFOSA, NEtFOSA. NMeFOSE and NEtFOSE were not analyzed in these samples			None of the PFAS could be quantified
The following PFAS had values below the LOQ of 50 µg/L: FOSA, NMeFOSA, NEtFOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTDA, PFHxDA, PFOcDA, 4 2 FTSA, 6 2 FTSA, 8 2 FTSA			

Table S 8: Results for degreaser
The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	liquid	liquid	liquid	liquid	liquid	solid
Sample	Degreaser _basic	Degreaser_M	Degreaser prof_H7	Degreaser hands_Weir	Degreaser kitchen_Johnson	Degreaser_Gunk
Code	COP_004	COP_024	COP_073	COP_074	COP_096	COP_075
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	ng/g
L-PFOS	<50	<50	<50	<50	<50	0.793
br-PFOS	<50	<50	<50	<50	<50	0.338
Sum PFOS	<50	<50	<50	<50	<50	1.13
PFOA	<50	<50	<50	<50	<50	1.67
PFHxS	<50	<50	<50	<50	<50	<0.25
FOSA	<50	<50	<50	<50	<50	<0.5
NMeFOSA	<50	<50	<50	<50	<50	NA
NEtFOSA	<50	<50	<50	<50	<50	NA
PFBS	<50	<50	<50	<50	<50	<0.1
PFPeS	<50	<50	<50	<50	<50	<0.15
PFHpS	<50	<50	<50	<50	<50	<0.2
PFNS	<50	<50	<50	<50	<50	<0.2
PFDS	<50	<50	<50	<50	<50	<0.2
PFDoDS	<50	<50	<50	<50	<50	<0.2
PFBA	<50	<50	<50	<50	<50	<0.4
PFPeA	<50	<50	<50	<50	<50	<1.3
PFHxA	<50	<50	<50	<50	<50	<0.6
PFHpA	<50	<50	<50	<50	<50	<0.3
PFNA	<50	<50	<50	<50	<50	<0.2
PFDA	<50	<50	<50	<50	<50	<0.5
PFUnDA	<50	<50	<50	<50	<50	<0.5
PFDoDA	<50	<50	<50	<50	<50	<0.5
PFTrDA	<50	<50	<50	<50	<50	<0.5
PFTDA	<50	<50	<50	<50	<50	<0.5
PFHxDA	<50	<50	<50	<50	<50	<0.7
PFOcDA	<50	<50	<50	<50	<50	<0.7
4_2_FTSA	<50	<50	<50	<50	<50	NA
6_2_FTSA	<50	<50	<50	<50	<50	<0.5
8_2_FTSA	<50	<50	<50	<50	<50	NA
NMeFOSE and NEtFOSE were not analyzed in these samples						

Table S 9: Results for cleaner
The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	solid	liquid	liquid	liquid
Sample	Dishwash_Cascade	Cleaner_Klinkar	Cleaner interior_FreshCar	Car shampoo_Simoniz
Code	COP_097	COP_071	COP_092	COP_093
Unit	µg/g	µg/L	µg/L	µg/L
L-PFOS	<50	<50	<50	<50
br-PFOS	<50	<50	<50	<50
Sum PFOS	<50	<50	<50	<50
PFOA	<50	<50	<50	<50
PFHxS	<50	<50	<50	<50
NMeFOSA	NA	<50	<50	<50
NEtFOSA	NA	<50	<50	<50
4_2_FTSA	NA	<50	<50	<50
8_2_FTSA	NA	<50	<50	<50
NMeFOSE and NEtFOSE were not analyzed in these samples				
The following PFAS had values below the LOQ of 50 µg/L: or 50 µg/g for sample COP_097 FOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTDA, PFHxDA, PFOcDA, 6_2_FTSA				

Table S 10: Results for wax and polisher samples
The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	semi-solid	semi-solid	semi-solid	liquid
Sample	Shoe polish_Express	Car wax_Klinkar	Car wax_Simoniz	Floor wax_Virginia
Code	COP_086	COP_088	COP_089	COP_091
Unit	µg/L	µg/L	µg/g	µg/L
L-PFOS	<50	<50	<50	<50
br-PFOS	<50	<50	<50	<50
Sum PFOS	<50	<50	<0.5	<50
PFOA	<50	<50	<50	<50
PFHxS	<50	<50	<50	<50
NMeFOSA	<50	<50	NA	<50
NEtFOSA	<50	<50	NA	<50
NMeFOSE and NEtFOSE were not analyzed in these samples				
The following PFAS had values below the LOQ of 50 µg/L or 50 µg/g for sample COP_089: FOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTDA, PFHxDA, PFOcDA, 6_2_FTSA				

Table S 11: Results for fabric samples

The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	solid	solid	solid	solid
Sample	Fabric antilfluid	Fabric waterproof	Fabric sporting	Fabric umbrella
Code	COP_105	COP_106	COP_107	COP_120
Unit	ng/g	ng/g	ng/g	ng/g
L-PFOS	<0.5	1.10	<0.5	<0.5
br-PFOS	<0.25	0.766	<0.25	<0.25
Sum PFOS	<0.5	1.86	<0.5	<0.5
PFOA	1.83	6.01	<1.2	1.77
PFHxS	<0.25	<0.25	<0.25	<0.25
FOSA	<0.5	<0.5	<0.5	<0.5
PFBS	<0.1	<0.1	<0.1	<0.1
PFPeS	<0.15	<0.15	<0.15	<0.15
PFHpS	<0.2	<0.2	<0.2	<0.2
PFNS	<0.2	<0.2	<0.2	<0.2
PFDS	<0.2	<0.2	<0.2	<0.2
PFDsDS	<0.2	<0.2	<0.2	<0.2
PFBA	<0.4	<0.4	<0.4	<0.4
PFPeA	<1.3	<1.3	<1.3	<1.3
PFHxA	<0.6	0.885	<0.6	0.813
PFHpA	<0.3	<0.3	<0.3	<0.3
PFNA	<0.2	0.527	<0.2	<0.2
PFDA	<0.5	2.45	<0.5	<0.5
PFUnDA	<0.5	<0.5	<0.5	<0.5
PFDODA	<0.5	0.954	<0.5	<0.5
PFTrDA	<0.5	<0.5	<0.5	<0.5
PFTDA	<0.5	<0.5	<0.5	<0.5
PFHxDA	<0.7	<0.7	<0.7	<0.7
PFOcDA	<0.7	<0.7	<0.7	<0.7
6_2_FTSA	<0.5	<0.5	<0.5	<0.5
NMeFOSA, NEtFOSA, NMeFOSE, NEtFOSE, and 4_2 FTSA were not analyzed in these samples				
The following PFAS had values below the LOQ of 50 µg/L:				
FOSA, NMeFOSA, NEtFOSA,				
PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDsDS,				
PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDODA, PFTrDA, PFTDA, PFHxDA, PFOcDA,				
4_2_FTSA, 6_2_FTSA, 8_2_FTSA				

Table S 12: Results for plastic samples
The number after "<" represents the limit of quantification (LOQ)

State	solid	solid	solid	solid	solid
Type	Plastic	Plastic	Plastic	Plastic	Plastic
Sample	HDPE	PVC tube	Plastic fiber Mainboard	Silicone seat	PVC waste
Code	COP_006	COP_008	COP_031	COP_104	COP_065
Unit	ng/g	ng/g	ng/g	ng/g	ng/g
L-PFOS	<0.5	<0.5	1.40	<0.5	<0.5
br-PFOS	<0.25	<0.25	0.619	<0.25	<0.25
Sum PFOS	<0.5	<0.5	2.02	<0.5	<0.5
PFOA	<1.2	<1.2	<1.2	<1.2	<1.2
PFHxS	<0.25	<0.25	<0.25	<0.25	<0.25
FOSA	<0.5	<0.5	<0.5	<0.5	<0.5
PFBS	<0.1	<0.1	216	<0.1	<0.1
PFPeS	<0.15	<0.15	<0.15	<0.15	<0.15
PFHpS	<0.2	<0.2	<0.2	<0.2	<0.2
PFNS	<0.2	<0.2	<0.2	<0.2	<0.2
PFDS	<0.2	<0.2	<0.2	<0.2	<0.2
PFDDoDS	<0.2	<0.2	<0.2	<0.2	<0.2
PFBA	<0.4	<0.4	<0.4	<0.4	<0.4
PFPeA	<1.3	<1.3	<1.3	<1.3	<1.3
PFHxA	<0.6	<0.6	<0.6	<0.6	<0.6
PFHpA	<0.3	<0.3	<0.3	<0.3	<0.3
PFNA	<0.2	<0.2	<0.2	<0.2	<0.2
PFDA	<0.5	<0.5	<0.5	<0.5	<0.5
PFUnDA	<0.5	<0.5	<0.5	<0.5	<0.5
PFDDoDA	<0.5	<0.5	<0.5	<0.5	<0.5
PFTTrDA	<0.5	<0.5	<0.5	<0.5	<0.5
PFTDA	<0.5	<0.5	<0.5	<0.5	<0.5
PFHxDA	<0.7	<0.7	<0.7	<0.7	<0.7
PFOcDA	<0.7	<0.7	<0.7	<0.7	<0.7
6_2_FTSA	<0.5	<0.5	<0.5	<0.5	<0.5
NMeFOSA, NEtFOSA, NMeFOSE, NEtFOSE, and 4_2 FTSA were not analyzed in these samples					

Table S 13: Results for leather treatment samples
The number after "<" represents the limit of quantification (LOQ)

State	liquid	liquid
Sample	Leather treatment_Codyeco	Cleaner leather_Simoniz
Code	COP_056	COP_094
Unit	µg/L	µg/L
L-PFOS	<50	<50
br-PFOS	<50	<50
Sum PFOS	<50	<50
PFOA	<50	<50
PFHxS	<50	<50
NMeFOSE and NEtFOSE were not analyzed in these samples		
The following PFAS had values below the LOQ of 50 µg/L: FOSA, NMeFOSA, NEtFOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, 4_2_FTSA, 6_2_FTSA, 8_2_FTSA		

Table S 14: Results for wire samples

The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	solid	solid
Sample	Electric wire_Ace	Electric wire_Cablec
Code	COP_101	COP_102
Unit	ng/g	ng/g
L-PFOS	<0.5	<0.5
br-PFOS	<0.25	<0.25
Sum PFOS	<0.5	<0.5
PFOA	<1.2	<1.2
PFHxS	<0.25	<0.25
FOSA	<0.5	<0.5
PFBS	<0.1	<0.1
PFPeS	<0.15	<0.15
PFHpS	<0.2	<0.2
PFNS	<0.2	<0.2
PFDS	<0.2	<0.2
PFDDoDS	<0.2	<0.2
PFBA	<0.4	<0.4
PFPeA	<1.3	<1.3
PFHxA	<0.6	<0.6
PFHpA	<0.3	<0.3
PFNA	<0.2	<0.2
PFDA	<0.5	<0.5
PFUnDA	<0.5	<0.5
PFDODA	<0.5	<0.5
PFTTrDA	<0.5	<0.5
PFTDA	<0.5	<0.5
PFHxDA	<0.7	<0.7
PFOcDA	<0.7	<0.7
6_2_FTSA	<0.5	<0.5
NMeFOSA, NEtFOSA, NMeFOSE, NEtFOSE, 4_2 FTSA, 8_2 FTSA were not analyzed in these samples		

Table S 15: Results for coolant and paint sample

The number after "<" represents the limit of quantification (LOQ)

State	liquid	liquid
Type	Coolant	Paint
Sample	Coolant_coldfire	Paint anticorrosive_UNIDAS
Code	COP_016	COP_076
Unit	µg/L	µg/L
L-PFOS	<50	<50
br-PFOS	<50	<50
Sum PFOS	<50	<50
PFOA	<50	<50
PFHxS	<50	<50

NMeFOSE and NEtFOSE were not analyzed in these samples

The following PFAS had values below the LOQ of 50 µg/L:

FOSA, NMeFOSA, NEtFOSA; PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDDoDS,
 PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDODA, PFTTrDA, PFTDA, PFHxDA, PFOcDA,
 4_2_FTSA, 6_2_FTSA, 8_2_FTSA

Table S 16: Results for paper and carton samples. The number after “<” represents the limit of quantification (LOQ); NR=not reported

State	solid	solid	solid	solid	solid	solid	solid	solid
Sample	Popcorn bag	Carton waxed	Paper waxed_reynolds	Paper baking_FreeHome	Pizza carton	Hamburger box	Paper waxed	Carbonless paper
Code	COP_026	COP_061	COP_083	COP_084	COP_115	COP_116	COP_117	COP_123
Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
L-PFOS	<0.10	1.10	<0.10	0.150	<0.10	<0.10	0.121	<0.10
br-PFOS	<0.10	0.188	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sum PFOS	<0.10	1.29	<0.10	0.150	<0.10	<0.10	0.121	<0.10
PFOA	36.1	<1.4	<1.4	<1.4	<1.4	<1.4	5.65	<1.4
PFHxS	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
FOSA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PFBS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFPeS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PFHpS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFNS	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
PFDS	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
PFDoDS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PFBA	2.16	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PFPeA	1.70	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32
PFHxA	NR	<0.44	<0.44	<0.44	<0.44	<0.44	NR	<0.44
PFHpA	2.82	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PFNA	3.37	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
PFDA	21.9	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
PFUnDA	2.81	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PFDoDA	9.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PFTTrDA	1.73	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
PFTDA	3.67	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
PFHxDA	1.18	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
PFOcDA	0.275	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
4_2_FTSA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
6_2_FTSA	2.09	0.972	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
8_2_FTSA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NMeFOSA, NeFOSA, NMeFOSE and NeFOSE were not analyzed in these samples								

Table S 17: Results for fire-fighting foams. The number after “<” represents the limit of quantification (LOQ); NA = not analyzed

Physical state	liquid	Liquid	liquid	liquid	liquid	liquid	liquid
Sample	FF_Chemguard (2013)	FF_Buckeye	FF_Ansulite	FF_Chemguard fluoroprotein	FF_Chemguard AR	FF_Ansulite	FF_Mezcla(mix)
Code	COP_001	COP_002	COP_013	COP_014	COP_015	COP_054	COP_055
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
L-PFOS	<50	<50	<50	<50	<50	<50	<50
br-PFOS	<50	<50	<50	<50	<50	<50	<50
Sum PFOS	<50	<50	<50	<50	<50	<50	<50
PFOA	<50	<50	<50	<50	<50	<50	<50
PFHxS	<50	<50	<50	<50	<50	<50	<50
PFBA	<50	<50	200	<50	101	<50	<50
PFPeA	<50	<50	98	<50	45	<50	<50
PFHxA	<50	133	2617	<50	420	<50	29
6_2_FTSA	31.1	83.5	27749	<50	305	93.6	177.5
8_2_FTSA	<50	<50	<50	<50	<50	<50	<50
NMeFOSE and NetFOSE were not analyzed in these samples							
The following PFAS had values below the LOQ of 50 µg/L: FOSA, NMeFOSA, NetFOSA; PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS; PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, and 4_2_FTSA							

Table S 18: Results for carpet and leather samples. The number after “<” represents the limit of quantification (LOQ); NA = not analyzed
Values in cells highlighted in red color may be overestimated due to interference

Stae	solid	solid	solid	solid	solid	solid	solid
Type	Carpet leather	Carpet leather	Carpet leather	Carpet leather	Carpet leather	Carpet leather	Carpet leather
Sample	Carpet_HomeClub	Carpet_FreeHome	Carpet_StarHome	Carpet_Stylo	Carpet_Boyoyouyou	Leather finsihed	Leather upholstery
Code	COP_027	COP_109	COP_113	COP_122	COP_124	COP_040	COP_058
Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
L-PFOS	0.611	<0.5	<0.5	<0.5	1.26	0.754	<0.5
br-PFOS	0.595	<0.25	<0.25	<0.25	0.223	1.04	<0.25
Sum PFOS	1.21	<0.5	<0.5	<0.5	1.48	1.79	<0.5
PFOA	1.36	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
PFHxS	<0.25	<0.25	<0.25	<0.25	<0.25	0.698	<0.25
6_2_FTSA	<0.5	<0.5	<0.5	<0.5	<0.5	0.656	2.563
NMeFOSA, NetFOSA, NMeFOSE, NetFOSE, 4_2_FTSA and 8_2_FTSA were not analyzed in these samples							
The following PFAS had values below the LOQ of 50 µg/L: FOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA							

Table S 19: Results for oil, greaser, additives. The number after "<" represents the limit of quantification (LOQ); NA = not analyzed

State	liquid	liquid	liquid	liquid	liquid	liquid	semi-solid
Sample	Chem driven oil drilling_Dorf Ketal	Brake fluid_Motorex	Anticorrosive oil_Starret	Motorcycle oil_76Lubricants	Leather greaser_Smit	Leather greaser_Smit&Zoom	Greaser_EP2 Chevron
Code	COP_019	COP_087	COP_080	COP_090	COP_037	COP_038	COP_077
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/g
L-PFOS	<50	<50	<50	<50	<50	<50	<50
br-PFOS	<50	<50	<50	<50	<50	<50	<50
Sum PFOS	<50	<50	<50	<50	<50	<50	<0.5
PFOA	<50	<50	<50	<50	<50	<50	<50
PFHxS	<50	<50	<50	<50	<50	<50	<50
NMeFOSA	<50	<50	<50	<50	<50	<50	NA
NEtFOSA	<50	<50	<50	<50	<50	<50	NA
NMeFOSE and NEtFOSE were not analyzed in these samples							
The following PFAS had values below the LOQ of 50 µg/L or 50 µg/g for sample COP_077: FOSA, PFBS, PFPeS, PFHpS, PFNS, PFDS, PFDoDS; PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTTrDA, PFTDA, PFHxDA, PFOcDA, 4_2_FTSA, 6_2_FTSA, 8_2_FTSA							

Table S 20: Results of water samples. Concentrations in ng/L. Results from Babahoyo river [1, 2]

Sample_ID	PFOS	PFOA	PFHxS	PFBS	PFBA	PFPeA	PFHxA	PFHpA	PFNA	PFDA	PFUnDA	Σ ₁₁ PFA
Babahoyo river (2017-1)	0.20	0.15	0.04	0.29	0.18	0.18	0.24	0.12	<LOQ	<LOQ	<LOQ	1.40
Babahoyo river (2017-2)	0.94	0.42	0.15	0.22	0.07	0.24	0.51	0.29	0.14	0.07	0.06	3.10
Babahoyo river (2017-3)	0.52	0.29	0.17	0.32	2.49	0.63	0.61	0.53	0.07	0.06	<LOQ	5.70
Babahoyo river (2017-4)	0.42	0.25	0.03	0.14	1.49	0.48	0.26	0.21	0.08	0.04	<LOQ	3.40
Babahoyo river (2018-1)	0.89	0.19	0.05	0.11	1.01	0.18	0.10	0.10	0.06	<LOQ	0.03	2.73
Babahoyo river (2018-2)	0.68	0.17	0.05	0.06	0.76	0.20	0.15	0.19	0.12	0.04	0.07	2.49
Babahoyo river (2018-3)	0.22	0.20	0.06	0.10	0.94	0.20	0.22	0.17	0.05	<LOQ	<LOQ	2.17
Babahoyo river (2018-4)	0.27	0.26	0.03	0.09	1.34	0.11	0.18	0.17	0.09	0.03	0.03	2.60
River Teaone	0.61	3.92	0.19	0.19	7.29	43.0	36.6	25.5	3.20	1.16	0.84	122
River Guayas	0.29	1.56	0.08	0.06	7.76	46.3	54.3	4.23	0.44	0.17	0.17	115
River Guayllamba	0.25	1.34	0.11	0.24	3.38	9.05	8.49	1.42	0.29	0.21	0.05	24.8
River Machángara	0.21	4.95	0.17	0.21	13.5	81.6	74.8	128	4.71	0.43	0.89	310
Drinking water	0.02	0.07	0.02	0.03	<LOQ	<LOQ	<LOQ	0.03	0.01	0.02	0.02	0.22

References

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- [2] H. Fiedler, A. Baabish, and M. Sadia (2022). Multivariate analysis of abiotic and biota samples for three perfluoroalkane acids. *Frontiers in Analytical Science*, **2**. DOI: 10.3389/frans.2022.954915.