Project report

Furthering the Understanding of the Migration of Chemicals from Consumer Products

A Study of Per- and Polyfluoroalkyl Substances (PFASs) in Clothing, Apparel, and Children's Items

December 2017

Commission for Environmental Cooperation

Please cite as:

> CEC. 2017. *Furthering the Understanding of the Migration of Chemicals from Consumer Products – A Study of Per- and Polyfluoroalkyl Substances (PFASs) in Clothing, Apparel, and Children's Items*. Montreal, Canada: Commission for Environmental Cooperation. 201 pp.

This publication was prepared by G. Munoz, J. Liu, A. Guitron, J. Jarjour, G. Auger-Casavant, S. Chaudhuri, J.M. Montiel-León, S. Mejia-Avendaño, S. Vo Duy and S. Sauvé for the Secretariat of the Commission for Environmental Cooperation. The information contained herein is the responsibility of the authors and does not necessarily reflect the views of the governments of Canada, Mexico or the United States of America.

Reproduction of this document in whole or in part and in any form for educational or non-profit purposes may be made without special permission from the CEC Secretariat, provided acknowledgment of the source is made. The CEC would appreciate receiving a copy of any publication or material that uses this document as a source.

Except where otherwise noted, this work is protected under a Creative Commons Attribution Noncommercial-NoDerivative Works License.

© Commission for Environmental Cooperation, 2017

ISBN: 978-2-89700-235-0 (*electronic version*)

Disponible en français – ISBN: 978-2-89700-237-4 (*version électronique*)

Disponible en español – ISBN: 978-2-89700-236-7 (versión electrónica)

Legal deposit – *Bibliothèque et Archives nationales du Québec*, 2017

Legal deposit – Library and Archives Canada, 2017

Publication Details

Document category: Project publication

Publication date: December 2017

Original language: English

Review and quality assurance procedures:

Final Party review: November 2017

QA17.289

Project:

Operational Plan 2015–2016 / Greening of Chemicals Management in North America

For more information:

Commission for Environmental Cooperation

393, rue St-Jacques Ouest, bureau 200

Montreal (Quebec)

H2Y 1N9 Canada

t 514.350.4300 f 514.350.4314

info@cec.org / www.cec.org

Table of Contents

List of Tables

List of Figures

List of Abbreviations and Acronyms

Please note, the abbreviated names of chemical substances have been kept identical in the three versions of this publication—English, French and Spanish—for consistency with those commonly used in the chemical literature.

BPA	bisphenol A
CEC	Commission for Environmental Cooperation
CHMS	Canadian Health Measures Survey
CIC	combustion ion chromatography
CRM	certified reference material
EPA	Environmental Protection Agency
EVA	ethylene-vinyl acetate
FOSA	perfluorooctane sulfonamide
FOSE	perfluorooctane sulfonamidoethanol
FTCAs	fluorotelomer carboxylates
FTOHs	fluorotelomer alcohols
FTSAs	fluorotelomer sulfonates
FTUAs	fluorotelomer unsaturated carboxylates
FWHM	Full width at half maximum peak height (resolution setting)
GLP	good laboratory practices
HRAM	high resolution accurate mass
iLOD	instrumental limit of detection
iLOQ	instrumental limit of quantification
IS	internal standard
LC	liquid chromatography
LC-MS	liquid chromatography-mass spectrometry
LOD	method limit of detection
LOQ	method limit of quantification
MeOH	methanol
mL	milliliter (10^{-3} liter)
m/z	ratio of an ion's mass number in atomic mass units to its charge number
N_2	nitrogen
NAAEC	North American Agreement on Environmental Cooperation
NAFTA	North American Free Trade Agreement
ng	nanogram (10^{-9} gram)
ng g^{-1}	nanogram per gram of item

NH_4OH	ammonium hydroxide
PBT	persistent, bioaccumulative, and toxic
PFAAs	perfluoroalkyl acids
PFASs	perfluoroalkyl and polyfluoroalkyl substances
PFBA	perfluorobutanoate [perfluorobutanoic acid]
PFBS	perfluorobutane sulfonate
PFCAs	perfluoroalkyl carboxylates
PFDA	perfluorodecanoate [perfluorodecanoic acid]
PFDS	perfluorodecane sulfonate
PFDoA	perfluorododecanoate [perfluorododecanoic acid]
PFHpA	perfluoroheptanoate [perfluoroheptanoic acid]
PFHxA	perfluorohexanoate [perfluorohexanoic acid]
PFHxDA	perfluorohexadecanoate [perfluoro-n-hexadecanoic acid]
PFHxS	perfluorohexane sulfonate
PFNA	perfluorononanoate [perfluorononanoic acid]
PFOA	perfluorooctanoate [perfluorooctanoic acid]
PFOcDA	perfluorooctadecanoate [perfluorooctadecanoic acid]
PFOS	perfluorooctane sulfonate
PFPeA	perfluoropentanoate [perfluoro-n-pentanoic acid]
PFSAs	perfluoroalkane sulfonates
PFTeDA	perfluorotetradecanoate [perfluorotetradecanoic acid]
PFTrDA	perfluorotridecanoate [perfluorotridecanoic acid]
PFUnA	perfluoroundecanoate [perfluoroundecanoic acid]
PIGE	particle-induced gamma ray emission
PP	polypropylene
PVC	polyvinyl chloride
QA/QC	quality assurance and quality control
rpm	revolutions per minute
SS	surrogate standard
UCMR	Unregulated Contaminant Monitoring Rule
UdeM	Université de Montréal
UHPLC	ultra-high performance liquid chromatography
µg	microgram (10^{-6} gram)
µg m^{-2}	microgram per square meter
US	United States

Abstract

Persistent, bioaccumulative, and toxic (PBT) substances may occur at a global scale, which raises concerns for environmental and human health. Several perfluoroalkyl and polyfluoroalkyl substances (PFASs) have been shown to exhibit such PBT properties, with potential for transboundary and long-range transport. Perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA) are two of the most studied PFASs. Despite the gradual phase-out of PFOS, PFOA, and certain related substances in Canada and the United States, many PFASs are used and permitted in consumer products, with possible implications for human exposure and environmental fate. The present survey examined 31 target PFASs in 137 articles of clothing and performance apparel (including children's items) collected across North America during the 2017 summer season. The Commission for Environmental Cooperation (CEC) approved the project, *Greening of Chemicals Management in North America*, with a goal being the development of knowledge useful to chemical risk assessment and/or risk management in Canada, Mexico and the United States, the Parties to the CEC. Sampling and analyses were performed through joint efforts from Université de Montréal and McGill University.

A total of 31 PFASs were examined in this study, i.e., PFOS, PFOA, and an additional 29 selected PFASs, which included perfluoroalkyl acid precursors. Testing was carried out in two distinct steps. The first step, work package **WP1**, involved determining the PFAS extractable fraction in organic solvent for 137 items. The second step involved investigating the potential release of the target PFASs in solutions relevant to human and environmental exposure. Selected articles were equilibrated with aqueous solutions of laundry detergent (**WP2**), artificial saliva (**WP3a**), and/or simulated sweat (**WP3b**). Considering the PFAS solvent-extractable fraction, 30 out of 31 target analytes were quantified in at least one sample and a positive detection of at least one PFAS was observed for 96 out of the 137 textile items (68.6%). Detection frequencies for individual PFASs ranged between 0 and 45%, and the $\sum_{31}$PFAS ranged from <LOD (below the method limit of detection) to 780 ng g^{-1} (nanogram per gram of item) (median $\sum_{31}$PFAS = 0.50 ng g^{-1}). PFAS levels in the migration tests (i.e., **WP2**, **WP3a**, and **WP3b**) were generally lower than those obtained per organic solvent extraction (**WP1**), and the PFAS profiles were typically shifted toward more water-soluble, short-chain PFASs.

Executive Summary

Mounting evidence exists to demonstrate the global distribution of certain perfluoroalkyl and polyfluoroalkyl substances (PFASs). This has spurred scientific research activities to investigate their occurrence, fate, and toxicity, and evaluate the feasibility and effectiveness of remediation measures. The extent to which PFASs are persistent, toxic, and/or bioaccumulative is dependent on the length of the fluoroalkyl chain and the additional chemical moieties present. Both short-chain and long-chain perfluoroalkyl acids are considered persistent. Some long-chain perfluoroalkane sulfonates and perfluoroalkyl carboxylates (i.e., $\geq C_6$ and $\geq C_8$, respectively) have attracted particular attention due to their toxicity and bioaccumulation potential. In order to assess and manage the risks posed by PFASs to environmental and human exposure, it is important to characterize the sources of these substances. Although environmental monitoring data for PFASs are available, only limited information exists concerning their occurrence and trends in consumer products, including children's products. While the recent phase-out and regulations on PFOS, PFOA and related substances may have translated to shifts toward alternatives, including shorter-chain PFASs, uncertainties still remain for consumer products, including those available in the North American market.

The present survey was conducted under the auspices of the Commission for Environmental Cooperation (CEC), as part of the CEC project, *Greening of Chemicals Management in North America*. The presence and migration of PFASs were investigated in a range of 137 textile items purchased across Canada, Mexico, and the United States during the summer 2017. Sampling and analyses were performed jointly by the authors, researchers from the Université de Montréal and McGill University. Analyses were conducted using ultra-high-performance liquid chromatography high-resolution accurate mass (UHPLC-HRAM) Orbitrap mass spectrometry.

The first research stage (**WP1**) evaluated the organic–solvent-extractable fraction of PFASs from textile items into surrogate solutions. Results from the **WP1** screening indicated that 30 of 31 target analytes were quantified in at least one sample; detection frequencies for individual PFASs ranged between 0 and 45%. Both long-chain and short-chain perfluoroalkyl carboxylates were variously detected in the items, and represented a variable proportion of the sum of targeted PFASs (Σ_{31}PFAS), which ranged from less than the method limit of detection (<LOD) to a high of 780 ng g^{-1} (although the median $\sum_{31}$PFAS was 0.50 ng g^{-1}). Perfluorooctane sulfonate (PFOS) was detected in 16% of the samples at typically low concentrations (<1 ng g^{-1} or <1 µg m^{-2}), compliant with the EU Textile Restricted Substance List limit for PFAS residues. In addition, PFOS represented only a minor percentage of the composition profile in the most contaminated items, while the short-chain perfluoroalkyl carboxylates, as well as perfluorobutane sulfonate (PFBS), were more prevalent. Regardless of country of purchase or country of manufacture, it is noteworthy that the items with the highest PFAS concentrations generally corresponded to materials with specific coatings/membranes.

The second research stage assessed the potential of PFAS release relevant to human and environmental exposure. Two scenarios were adopted for this purpose. The first scenario assessed the leaching potential of PFASs from textiles under simulated laundry washing conditions (**WP2**). The second scenario considered the human exposure by contacting the materials with artificial saliva (**WP3a**) and simulated sweat (**WP3b**). A significant proportion of PFASs was found to migrate from the fabric materials to the three distinct simulated solutions (i.e., **WP2**, **WP3a**, and **WP3b**), the profiles being shifted toward more water-soluble, short-chain PFASs, in comparison to those obtained by organic solvent extraction (**WP1**).

Acknowledgments

The Commission for Environmental Cooperation (CEC) extends its sincere appreciation to Gabriel Munoz,[1,2] Jinxia Liu,[2] Alejandra Guitron,[1] Julie Jarjour,[2] Gabriel Auger-Casavant,[1] Sampriti Chaudhuri,[2] Juan Manuel Montiel-León,[1] Sandra Mejia-Avendaño,[2] Sung Vo Duy,[1] and Sébastien Sauvé,[1] the researchers and principal authors of this publication, for their diligent work in conducting the testing of PFASs in selected consumer products and developing the report for release in three languages.

The CEC also wishes to thank the members of the project's Steering Committee and experts who provided valuable guidance and review during this process: Angelina Buchar and Tamara Trudeau (Health Canada), Alison Kennedy and Diep Le (Environment and Climate Change Canada), Arturo Gavilan and Ania Mendoza Cantu (*Instituto Nacional de Ecología y Cambio Climático)*, Laura Nazef and Xiaoyu Liu (United States Environmental Protection Agency).

Finally, the CEC acknowledges the staff of the CEC Secretariat's Environmental Quality Unit involved in bringing this project to fruition: Orlando Cabrera-Rivera, head of unit; Heidy Rivasplata Maldonado and Danielle Vallée, project leads; Erika Hercules, program assistant; the CEC publications editors, Douglas Kirk, Jacqueline Fortson, and Johanne David.

[1] Department of Chemistry, Université de Montréal, Montréal, QC, H3C 3J7, Canada

[2] Department of Civil Engineering, McGill University, Montréal, QC, H3A 0C3, Canada

Introduction

The CEC, a trinational organization created by Canada, Mexico and the United States under the North American Agreement on Environmental Cooperation (NAAEC), was established to address regional environmental concerns, help prevent potential trade and environmental conflicts, and promote the effective enforcement of environmental law. The Agreement complements the environmental provisions of the North American Free Trade Agreement (NAFTA) **[1]**. Among the host of themes highlighted by the CEC relating to chemicals management, particular concerns have been raised regarding highly persistent, bioaccumulative, and toxic (PBT) substances **[2]**. Following their release to the environment, such pollutants may persist in the environment and enter into food chains with biomagnification effects and adverse health outcomes. PBT pollutants can also display a long-range transport potential, implying potential exposures for remote environments and populations, including those in the Canadian High Arctic **[3,4]**.

The current project, *Greening of Chemicals Management in North America*, is consistent with the second strategic priority of CEC's 2015–2020 Strategic Plan, with a view to promoting Green Growth through the development of information and tools to support sustainable consumption and production and enhance the management and sustainable use of chemicals in products **[1,5]**. Under the aegis of the CEC, this project, among other objectives, aimed at developing the trilateral knowledge of potential chemicals of concern in consumer products in markets from Canada, Mexico and the United States. A previous CEC study focused on flame retardants in office and household furniture, where chlorinated flame retardants were recurrently detected **[6]**. In the present study, perfluoroalkyl and polyfluoroalkyl substances (PFASs) are being assessed for their presence and migration potential in Phase 2 of "Furthering the understanding of the migration of chemicals from manufactured items and subsequent human exposure to them and/or their releases to the environment".

PFASs have been widely used in specialty applications for more than six decades **[7,8]**. Some PFASs are polymeric substances containing perfluoroalkyl moieties that provide chemical resistance and thermal stability, as well as water and stain repellency. In certain PFASs, such as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), the combination of the lipophobic and hydrophobic perfluoroalkyl chain with a polar hydrophilic functional group (i.e., $–COO^-$ or $–SO_3^-$) results in optimal surfactant (tensioactive) properties for many applications. Typical applications include the fluoropolymer industry (where PFCAs [perfluoroalkyl carboxylates] have been used as processing agents), aqueous film-forming foams (AFFFs) to fight fuel-based fires, as well as a variety of everyday products such as cookware, food packaging, cosmetics, impregnating agents (e.g., fabric protector sprays), and water and oil-resistant garments **[7,8]**. As a result of the increase in PFAS industrial production between the 1970s-1990s **[9]** and their inherent persistence, it was likely that such contaminants would start building up in the environment. However, the global distribution of PFASs across multiple environmental media was not evidenced until the last two decades **[10]**.

PFAS chain length (i.e., long versus short chains) may have a direct influence on the properties, environmental fate, use trends, and risk reduction actions. Note that in the present study, the international convention was used for the definition of long-chain perfluoroalkane sulfonates and PFCAs (i.e., $\geq C_6$ and $\geq C_8$, respectively). The ubiquitous presence of certain long-chain perfluoroalkyl acids (PFAAs), including PFOS, is of concern, given their potential to be persistent, bioaccumulative, and toxic **[11–18]**. The recognition of these hazardous properties and global distribution has led the scientific, regulatory and industrial communities to engage in international efforts to curb the production and uses of long-chain PFASs **[19]**. Notably, PFOS has been phased out of production and/or commerce in Canada and the United States since 2000–2002, prohibited from manufacture and most uses in European Union countries since 2008 (Directive 2006/122/EC), and included in the list of persistent organic pollutants of the Stockholm Convention in 2009. However, some exemptions for

use have remained for particular applications, which may thus represent a continued source of PFOS release and exposure. Major manufacturers also committed to the phase-out of PFOA and longer-chain analogues by 2015 **[20]**. In Canada, a phased approach to the control of PFASs was implemented which included an Environmental Performance Agreement with suppliers of fluorochemicals to eliminate, by 2015, PFOA and PFCAs residues from their products sold in Canada **[21]**. In 2016, PFOA, its salts and precursors, and products containing such substances were prohibited with a limited number of exemptions **[22]**. These exemptions include manufactured items such as those analyzed in the present study.

Relatively high levels of PFAAs and/or their precursors may be found in human blood samples from workers exposed to these chemicals in the course of their occupation **[23,24]**, as well as in samples from communities where a historical source of PFAS contamination exists **[25]**. Although a recent study on PFASs in US Red Cross blood donors suggested that the concentrations of long-chain PFAAs may already be declining **[26]**, most people from industrialized countries still have measurable amounts of PFAAs in their blood. Results from the two cycles of Canadian Health Measures Survey (CHMS) indicated that PFOS, PFOA, and PFHxS (perfluorohexane sulfonate) were nearly always detected (frequencies of detection = 98 to 100% of the samples) in the plasma samples of CHMS participants in 2007–2009 and 2009–2011, while short-chain PFAAs (PFBS [perfluorobutane sulfonate], PFBA [perfluorobutanoate], and PFHxA [perfluorohexanoate]) presented low detection frequencies (0 to 3%) **[27]**. Occurrence data on PFOS and other PFASs in humans, wildlife, or environmental samples in Mexico are virtually non-existent. While there are numerous PFAA exposure pathways for the general human population, exposure may predominately occur during the consumption of contaminated seafood and drinking water, by inadvertent ingestion of indoor and outdoor dust, or by exposure to PFAA precursors and their subsequent transformation products **[28–31]**. Results of the Unregulated Contaminant Monitoring Rule (UCMR3) study indicate that approximately 6 million US residents may be chronically exposed to PFOS/PFOA levels that exceed the recently updated EPA drinking water guidelines **[32]**. Age-specific behavioral changes may modify the relative contribution of each of the pathways to the overall PFAS exposure **[33]**. For instance, infants may be particularly exposed to PFASs and other chemicals of concern through the mouthing of objects during early-life, which is not necessarily the case of older individuals **[33]**.

A likely source of PFAS exposure comes from the wide variety of consumer products that may contain PFASs, including food contact papers **[34]** and textiles **[35–42]**. Despite the gradual phase-out of selected PFASs, PFAS-impregnated products could still find their way to consumers in North America. This has possible implications for human exposure and environmental fate. At the onset of the present study, only limited data existed regarding the PFAS content in textile items from the US **[43]**, and to the authors' best knowledge, no such data were available for Canada and Mexico. A previous study by the EPA on 116 articles in commerce suggested that pre-treated carpeting and upholstery could be significant sources of perfluoroalkyl carboxylates in indoor environments **[43]**. Kotthoff et al. examined 21 PFASs in various articles of commerce, including outdoor textiles and gloves **[40]**. The study indicated that perfluoroalkyl carboxylates and fluorotelomer alcohols could be particularly prevalent in the PFAS profiles **[40]**. Similar trends were detected by a Danish EPA survey **[38]** on PFASs in textiles, as well as in the work of Gremmel et al. on PFASs in outdoor jackets **[41]**. However, a significant data gap exists with regard to the occurrence and trends of PFASs in textile items available in the North American market. Since such items may release PFASs during their useful life, this might represent another important research avenue to explore.

This study was intended to enhance trilateral knowledge about the presence and migration of selected PFASs in a range of textile items (e.g., waterproof apparel, outdoor jackets, etc.) purchased across North America in the 2017 summer season. Instrumental analyses were performed using ultra-high-performance liquid chromatography (UHPLC) coupled to high-resolution accurate mass (HRAM) Orbitrap mass spectrometry **[44–47]**. The first work package (**WP1**) characterized the solvent-

extractable content of 31 PFASs in a range of 137 new textile samples purchased across Canada, Mexico and the United States. The second part of this study assessed the potential of PFAS release (relevant to environmental and human exposure) from selected items. Different scenarios were considered for this purpose. The first scenario evaluated the potential of PFAS release from textiles in laundry water when washed under simulated conditions (**WP2**). A preliminary assessment of the human exposure via textiles was also conducted, adapted from procedures from the reviewed literature for other emerging contaminants **[48–51]**. Here, two scenarios were considered: i) possible ingestion by infants from mouthing (i.e., migration of PFASs from infant and children's clothing exposed to artificial saliva) (**WP3a**) and ii) dermal exposure during physicochemical stress conditions (i.e., migration of PFASs from textiles exposed to artificial sweat) (**WP3b**). Potential limitations and particular caveats related to the analysis of such diverse and complex materials will be discussed in the last section of this report.

Methodology

Sample collection

Approximately the same numbers of textile items available to consumers were purchased from each country (see the sampling breakdown in **Table 1**). All 137 items, ranging from low-end to premium quality products, were purchased new between May 2017 and September 2017, from categories that were identified as candidates for containing PFASs. The focus was principally on clothes, including outdoor or sport performance apparel and articles of clothing for use with infants. Purchases were made both online (taking note of availability within the three countries) and in-store. In-store purchases were made opportunistically within all three countries, sometimes while team members were travelling. Both online purchases and in-store purchases were conducted by targeting retailers that were deemed most popular with locals. Although the full geographical range of North America could not be covered within this study, the samples were purchased from various regions in each country comprising a few of the larger cities. The sampling covered 5 cities in Canada, 6 cities in Mexico, and 16 cities in the United States (see also **Table S1** of the Annex). The breakdown of in-store and online purchases per country is also indicated in the Annex (**Figure S1**).

Table 1. List of the items purchased per country and category

Category/Item	Canada	Mexico	United States	Subtotal
Baby/Children's performance clothing	**5**	**8**	**18**	**31**
Children's outdoor jackets	1	2	8	11
Children's rainsuits	3	6	7	16
Children's waterproof trousers	1	0	3	4
Adult performance clothing	**17**	**14**	**17**	**48**
Adult outdoor jackets	8	3	9	20
Adult rainsuits	4	10	5	19
Adult waterproof trousers	3	1	3	7
Adult cycling jackets	2	0	0	2
Miscellaneous	**21**	**24**	**13**	**58**
Baby blankets, mats, or pads	1	1	2	4
Baby/Children's bibs	6	19	4	29
Bed linens	0	1	2	3
Flame retardant / flame resistant*	2	1	1	4
Sport gloves (bodybuilding, cycling)	1	1	1	3
Snowsuits or snow hats	5	0	1	6
Winter gloves	4	0	1	5
Other**	2	1	1	4
Grand total	**43**	**46**	**48**	**137**

*e.g., oven gloves, fire-resistant coveralls and fabrics.
**including working gloves, a waterproof bag, and diaper protectors for children.

Sample reception and storage

Upon sample reception at the analytical facilities at the Université de Montréal (UdeM), the items were photographed in their original purchased condition (see also Data D1-D137 of the Annex). Each sample was assigned a unique internal laboratory code (e.g., CEC-001) and placed inside a resealable polyethylene bag identified with the internal laboratory code and reception date. The sample database was documented with the following elements, when applicable: Internal laboratory Code, Date of purchase, Date of reception and storage, Sampling location (Country, city, particular location, shop), Item details (brand, name, classification regarding size/sex/age, country of manufacture, price), and fabric composition, as well as any labeling or marketing of additional features such as "PVC-free" (polyvinyl chloride) or "BPA-free" (Bisphenol A), or waterproofing coatings. On the day of the reception, the protected samples were stored in cardboard boxes specially assigned for this purpose until sample preparation. After subsampling, the items were stored in their original labeled resealable bag and box in the event of future analyses.

List of targeted PFASs

The list of 31 targeted chemicals is indicated in **Table 2** (see also **Figure S2** of the Annex for the corresponding chemical structures) and was established in accordance with the previous literature on PFASs in textiles **[38–42]**, taking into account the availability of certified standards, and targeting the analytes amenable to ultra-trace liquid chromatography mass spectrometry (LC-MS) analysis. Note that even though it is theoretically possible to analyze volatile PFASs such as fluorotelomer alcohols (FTOHs) by LC-MS **[52]**, such compounds were not included in the present survey due to their higher instrument detection limits compared to those of the other PFASs. The list of targeted PFASs therefore included 13 perfluoroalkyl carboxylates (PFCAs of chain lengths: C_4-C_{14}, C_{16}, C_{18}), 5 perfluoroalkane sulfonates (PFSAs of chain lengths: C_4, C_6, C_7, C_8, C_{10}), 3 fluorotelomer carboxylates (6:2, 8:2, and 10:2 FTCA), 4 fluorotelomer sulfonates (4:2, 6:2, 8:2, and 10:2 FTSA), 3 fluorotelomer unsaturated carboxylates (6:2, 8:2, and 10:2 FTUA), perfluorooctane sulfonamide (FOSA), and two FOSA N-alkylated derivatives (MeFOSA, EtFOSA). Solutions of native PFASs were acquired at high chemical purity (>98%) and purchased from Wellington Labs, Inc. (ON, Canada). Diluted working solutions were prepared in methanol (MeOH) and stored at -20°C. Isotope-labeled standards were also purchased from Wellington Labs, Inc. (ON, Canada). Two types of internal standards were used: $^{13}C_2$-6:2FTSA was used as an *injection internal standard* (IS, added to the samples just prior LC-MS analysis), while other internal standards (i.e., $^{13}C_4$-PFBA, $^{13}C_5$-PFPeA, $^{13}C_5$-PFHxA, $^{13}C_4$-PFHpA, $^{13}C_8$-PFOA, $^{13}C_9$-PFNA, $^{13}C_6$-PFDA, $^{13}C_7$-PFUnA, $^{13}C_2$-PFDoA, $^{13}C_2$-PFTeDA, $^{13}C_2$-PFHxDA, $^{13}C_3$-PFBS, $^{13}C_3$-PFHxS, $^{13}C_8$-PFOS, $^{13}C_2$-8:2FTSA, $^{13}C_2$-6:2FTUA, $^{13}C_2$-8:2FTUA, $^{13}C_8$-FOSA, and d5-N-EtFOSA) were used as *surrogate* (recovery) *internal standards* (SS), being typically added to the samples at the start of the preparation procedure (for instance, before the solvent extraction step in the case of **WP1**). The list of isotope-labeled standards, as well as the correspondence between native analyte and isotope-labeled standards, are provided in the Annex (**Tables S2-S3**). For some analytes, a semi-quantitative estimation of the analyte concentration was performed using a closely related native standard and isotope-labeled surrogate standard, when applicable (**Table S2** of the Annex). The confidence level in analyte quantification is provided in **Table 2**.

Procedure for PFAS solvent extraction (WP1)

Given the complexity of the various items considered in the present study (some being composed of heterogenous materials, for instance reflective strips on a polyester cycling jacket, etc.), the possibility that PFAS concentrations may vary according to the area subsampled within the item could not be discounted. Although it was beyond the scope of the present study to perform a detailed

assessment of the so-called "within sample- heterogeneity", the sampling procedure was established to lessen this potential source of bias. Thus, for each textile item a composite sample (total surface area targeted ~30 cm^2) was made using 3 subsamples (each of ~3 cm x 3 cm) from different parts of the item (e.g., for a jacket sample: one piece from the hood, the sleeves, and the body). The area and mass of each of the subsamples were recorded, as well as the total mass of the resulting composite sample. Note that in the case of multi-layered garments, both the inner and outer parts were sampled.

The method for the present solvent-extractable PFAS screening (**WP1**) was based on that of Hanssen and Herzke **[39]** with minor modifications. The composite samples were typically placed in 15 mL polypropylene (PP) tubes and 100 µL of a ~20 ng mL^{-1} surrogate standard (SS) solution (see also **Table S2** of the Annex) was spiked onto the surface of the textile samples. Following the addition of 8 mL of methanol, the tubes were placed in an ultrasonication bath to promote the extraction of PFASs from the textile samples (cycle time of 30 min.). After a sufficient rest period (>20 min.) to let the samples cool down to ambient temperature, the extracts were transferred to new PP tubes. The initial textile samples were further rinsed with methanol (~2 mL) and vortexed (1 min.). The rinse fraction was combined with the extract fraction, after which the mixture was evaporated down to ~2 mL using a gentle N_2 (nitrogen) stream and mild heating (~30°C). To further clean up the samples, the extracts were passed through graphite cartridges (ENVI-Carb, 250 mg/6 mL) **[45,47]** and the filtrate was collected in new 15-mL PP tubes. A final rinse step was conducted in which the graphite cartridge was flushed with 2 mL of methanol, the rinse fraction being combined with the earlier eluate. The extract was brought down to ~1 mL (N_2, ~30°C) and the final volume in all samples adjusted to ~1.1 mL by gravimetric control. Following brief vortexing and centrifugation, a 150 µL aliquot of the extract was transferred to a 250-µL PP injection vial, to which 50 µL of an 8 ng mL^{-1} internal standard solution in methanol (IS; $^{13}C_2$-6:2-FTSA) were added. The samples were briefly vortexed and subjected to LC-MS analysis.

Table 2. List of target PFASs, associated data quality, and CAS R.N.

Acronym	n[a]	C_i[b]	Compound name	Data quality[c]	CAS Registry Number
PFCAs			**Perfluoroalkyl carboxylates**		
PFBA	3	C_4	perfluorobutanoate	Qn	45048-62-2
PFPeA	4	C_5	perfluoropentanoate	Qn	45167-47-3
PFHxA	5	C_6	perfluorohexanoate	Qn	92612-52-7
PFHpA	6	C_7	perfluoroheptanoate	Qn	120885-29-2
PFOA	7	C_8	perfluorooctanoate	Qn	45285-51-6
PFNA	8	C_9	perfluorononanoate	Qn	72007-68-2
PFDA	9	C_{10}	perfluorodecanoate	Qn	73829-36-4
PFUnA	10	C_{11}	perfluoroundecanoate	Qn	196859-54-8
PFDoA	11	C_{12}	perfluorododecanoate	Qn	171978-95-3
PFTrDA	12	C_{13}	perfluorotridecanoate	Qn	862374-87-6
PFTeDA	13	C_{14}	perfluorotetradecanoate	Qn	365971-87-5
PFHxDA	15	C_{16}	perfluorohexadecanoate	Qn	1214264-30-8
PFOcDA	17	C_{18}	perfluorooctadecanoate	Qn	798556-82-8
PFSAs			**Perfluoroalkane sulfonates**		
PFBS	4	C_4	perfluorobutane sulfonate	Qn	45187-15-3
PFHxS	6	C_6	perfluorohexane sulfonate	Qn	108427-53-8
PFHpS	7	C_7	perfluoroheptane sulfonate	Qn	375-92-8[d]
PFOS	8	C_8	perfluorooctane sulfonate	Qn	45298-90-6
PFDS	10	C_{10}	perfluorodecane sulfonate	Qn	126105-34-8
FTCAs			**Fluorotelomer carboxylates**		
6:2 FTCA	6		6:2 fluorotelomer carboxylate	Qn	53826-12-3
8:2 FTCA	8		8:2 fluorotelomer carboxylate	Sq	27854-31-5
10:2 FTCA	10		10:2 fluorotelomer carboxylate	Sq	53826-13-4
FTSAs			**Fluorotelomer sulfonates**		
4:2 FTSA	4		4:2-fluorotelomer sulfonate	Qn	414911-30-1
6:2 FTSA	6		6:2-fluorotelomer sulfonate	Qn	425670-75-3
8:2 FTSA	8		8:2-fluorotelomer sulfonate	Qn	481071-78-7
10:2 FTSA	10		10:2-fluorotelomer sulfonate	Sq	120226-60-0[d]
FTUAs			**Fluorotelomer unsaturated carboxylates**		
6:2 FTUA	5		6:2 fluorotelomer unsaturated carboxylate	Qn	70887-88-6
8:2 FTUA	7		8:2 fluorotelomer unsaturated carboxylate	Qn	70887-84-2
10:2 FTUA	9		10:2 fluorotelomer unsaturated carboxylate	Sq	70887-94-4
FOSAs			**FOSA and N-alkylated derivatives**		
FOSA	8		perfluorooctane sulfonamide	Qn	754-91-6
MeFOSA	8		N-methyl-perfluorooctane sulfonamide	Sq	31506-32-8
EtFOSA	8		N-ethyl-perfluorooctane sulfonamide	Qn	4151-50-2

[a] Total number of perfluorinated carbon atoms.
[b] Total number of carbon atoms, specified for perfluoroalkyl carboxylates and perfluoroalkane sulfonates only.
[c] Data quality: Indicates whether analytes were considered quantitative (Qn) or semi-quantitative (Sq).
[d] CAS No of the corresponding acid.

Procedures for PFAS migration tests

The PFAS screening database generated from the first work package served as a starting point to select a subset of samples for the migration tests. However, particular sample categories may be more relevant for certain migration testing (for intance, bibs for saliva migration tests). For this reason, not all item categories from the **WP1** screening were considered for the subsequent migration tests (**WP2**, **WP3a**, **WP3b**). Samples that yielded non-detectable or low $\sum_{31}$PFAS concentrations (<0.5 ng g^{-1}) in the **WP1** round were not considered for further tests. Those items that were included in the various migration tests, as well as associated analytical procedures, are discussed below.

- **Leaching potential to laundry water (WP2)**

The following types of items were assessed as part of the **WP2** testing: outdoor jackets (n = 2), cycling jackets (n = 2), and waterproof trousers (n = 1) ($\sum_{31}$PFAS as per **WP1** = 39–780 ng g^{-1}). Composite samples were prepared as previously described for **WP1**.

The samples were placed in 50-mL PP tubes, along with glass beads (to simulate the frictional/abrasive aspect of laundering). As a proxy for the actual washing machine cycles, the migration exposure consisted of three sequential steps: **i) Washing step.** A volume of ~20 mL of pre-heated (~40°C) laundry water (carbon-filtered tap water containing 0.25 g L^{-1} of concentrated commercial liquid detergent for laundry) was added to the PP tubes. The detergent concentration was selected in agreement with simulated laundering migration tests **[49,53]**. The tubes were mixed for 30 min. using a rotational device (~30–40 rpm) placed in a thermostated oven (~40°C). The laundry water was transferred to a new 50 mL PP tube. **ii) Rinse step.** Rinsing water (carbon-filtered tap water without laundry detergent) was added (~20 mL) to the initial textile sample PP tube, and rotated for 10 min. using a rotational device (~30–40 rpm [revolutions per minute]). The resulting water was transferred to the 50 mL PP tube to combine it with the initial laundry wash fraction. **iii) Spin-drying step.** The empty tube containing the wet tissue was centrifuged (1000 rpm, 5 min). The resulting water was transferred to the 50-mL PP tube to combine it with the first two fractions.

The resulting water was subsequently spiked with 100 µL of a 100 ng mL^{-1} isotope-labeled surrogate standard (SS) mixture (see also **Table S2** of the Annex, where these are listed). The pH of the solution was adjusted to ~6.0 with formic acid. The samples were subsequently submitted to solid-phase extraction using weak-anion exchange cartridges (Strata X-AW, 200 mg/6 mL), adapted from a procedure described elsewhere **[54]**. The organic eluates (i.e., 2 x 4 mL of a solution of 0.2% ammonium hydroxide in methanol [MeOH/NH_4OH 0.2%]) were recovered in 15 mL PP tubes and concentrated to ~1 mL (N_2, 30°C). Then 100 µL of a 50 ng mL^{-1} internal standard solution (IS) ($^{13}C_2$-6:2-FTSA) were added. The samples were vortexed and a 200-µL aliquot was transferred to a 250-µL PP injection vial for LC-MS analysis.

- **Leaching potential when subjected to artificial saliva (WP3a)**

The following types of items were assessed as part of the **WP3a** testing: baby/Children's clothes (n = 1), baby/Children's bibs (n = 2), and a baby changing table mat (n = 1) ($\sum_{31}$PFAS as per **WP1** = 0.99–61 ng g^{-1}). Composite samples were prepared as previously described for **WP1**.

The migration fluid (artificial saliva) was prepared using the British Standard Specification for Safety Harnesses (also referenced by Steiner et al. **[50]**). Briefly, the artificial saliva solution was prepared using ultrapure water amended with 4.5 g L^{-1} sodium chloride, 0.3 g L^{-1} potassium chloride, 0.3 g L^{-1}

sodium sulfate, 0.3 g L^{-1} ammonium chloride, 0.2 g L^{-1} urea, and 3 g L^{-1} lactic acid. The pH was adjusted to 6.5–7.0 using sodium hydroxide.

The samples were placed in 50-mL PP tubes, along with glass beads. The artificial saliva was pre-heated at 37°C to mimic body temperature before addition to the PP tubes (~20 mL). The test mixture was then mechanically stirred during 1 hour using a rotational device (~30–40 rpm) placed in a thermostated oven (~37°C). After the migration test, the aqueous medium was retrieved from the test tube and introduced into a new 50 mL PP tube.

The resulting water was subsequently spiked with 100 µL of a 20 ng mL^{-1} isotope-labeled SS mixture (see also **Table S2** of the Annex). The samples were subsequently submitted to solid phase extraction using weak-anion exchange cartridges (Strata X-AW, 200 mg/6 mL), adapted from a procedure elsewhere described **[54]**. The organic eluates (MeOH/NH_4OH 0.2%) were recovered in 15 mL PP tubes and concentrated to ~0.25 mL (N_2, 30°C), after which 100 µL of a 20 ng mL^{-1} IS solution ($^{13}C_2$-6:2-FTSA) were added. The samples were vortexed and a 200-µL aliquot was transferred to a 250-µL PP injection vial for LC-MS analysis.

- **Leaching potential when subjected to artificial sweat (WP3b)**

The following item types were assessed as part of the **WP3b** testing: adult outdoor jackets (n = 3), children's outdoor jackets (n = 2), cycling gloves (n = 1), children's gloves (n = 1), winter gloves (n = 1), and waterproof trousers (n = 3) ($\sum_{31}$PFAS as per **WP1** = 1.3–780 ng g^{-1}). Composite samples were prepared as previously described for **WP1**.

The migration fluid (artificial sweat solution) was prepared using British Standard BS EN 1811 (also referenced by Hedberg et al. **[48]**). Briefly, this involved using a preparation of ultrapure water amended with 5 g L^{-1} of sodium chloride, 1 g L^{-1} of urea, and 1 g L^{-1} of lactic acid. The pH was adjusted to 6.5–7.0 with sodium hydroxide.

The samples were placed in 50 mL PP tubes, along with glass beads. The artificial sweat was pre-heated at 37°C to mimic body temperature, after which a volume of ~20 mL of the artificial sweat was added to the PP tubes. The tubes were mechanically stirred during 1 hour, using a rotational device (~30–40 rpm) placed in a thermostated oven (~37°C) **[55]**. After the migration test, the aqueous medium was retrieved from the test tube and introduced into a new 50-mL PP tube.

The resulting water was subsequently spiked with 100 µL of a 20 ng mL^{-1} isotope-labeled SS mixture (see also **Table S2** of the Annex). The samples were subsequently submitted to solid phase extraction using weak-anion exchange cartridges (Strata X-AW, 200 mg/6 mL), adapted from a procedure elsewhere described **[54]**. The organic eluates (MeOH/NH_4OH 0.2%) were recovered in 15 mL PP tubes and concentrated to ~0.25 mL (N_2, 30°C), and then 100 µL of a 20 ng mL^{-1} IS solution ($^{13}C_2$-6:2-FTSA) were added. The samples were vortexed and a 200-µL aliquot was transferred to a 250-µL PP injection vial for LC-MS analysis.

Instrumental method

Target PFASs were assessed using the high sensitivity and specificity provided by ultra-high-performance liquid chromatography (UHPLC) coupled to negative electrospray ionization and high-resolution accurate-mass (HRAM) Orbitrap mass spectrometry (Thermo Q-Exactive Orbitrap). The organic solvent extracts generated in **WP1**, **WP2**, **WP3a**, and **WP3b** were analyzed by small volume injection (8 µL) UHPLC-Orbitrap-MS. The Orbitrap mass spectrometer was operated in Full Scan MS mode with a resolution setting of R=70,000 FWHM (full width at half maximum peak height) at 200 m/z, and a 150–1000 m/z mass scan range was applied **[45,47]**. The Dionex Ultimate 3000 LC

chain was controlled via the Chromeleon 7.2 Software (Thermo Fisher Scientific, Waltham, MA, USA, and Dionex Softron GMbH part of Thermo Fisher Scientific, Germany). A Thermo Hypersil Gold aQ (polar end-capped C18) column (100 mm x 2.1 mm; 1.9 µm particle size) was used for analyte separation. The possibility of background PFASs coming from LC tubings was prevented by using a trap column (Thermo Hypercarb, 20 mm x 2.1 mm; 7 µm particle size) positioned immediately after the aqueous and organic LC mobile phases mixing point but before the injector **[47]**. Further details on instrument operating conditions are provided in the Annex section. An illustration of the chromatographic performances obtained for the 26 quantitative PFASs is also included in the Annex (**Figure S3**).

Compliance to Good Laboratory Practices and Quality Assurance and Quality Control

The research facilities complied with general Good Laboratory Practices (GLP) for trace organic contaminants. Notably, preparation laboratory benches were cleaned daily and systematically covered with aluminum and paper layers prior to sample handling. Pipette tips and test tubes were solvent-extracted and dried prior to use. To minimize risks of cross-contamination at the sample reception or subsample collection steps, the bench top was further accommodated with a protective paper towel layer (trace-contaminant grade), which was discarded between each sample. The samples were handled with protective gloves (discarded between each sample). The collection of sample subsets was performed using scissors (methanol-rinsed and cleaned with disposable wipers between each sample). Due to the possibility of sorption losses, the use of glass material was generally avoided. Traceability of samples was ensured through continuous labeling at each step of the analysis.

The accurate mass calibration of the Q-Exactive mass spectrometer was performed weekly. When applicable, positive identification of target PFASs relied on matching retention times with certified standards and exact mass accuracy (tolerance: ± 5 ppm). PFASs in instrumental blanks were kept to non-detectable levels via a delay column (see also the Instrumental method section for details).

Replicate laboratory procedural blanks were included within the different batch of samples. Procedural blanks for **WP1** (n = 37 procedural blanks), **WP2** (n =3), **WP3a** (n = 3) and **WP3b** (n = 3) followed rigorously the same preparation steps as the samples. Procedural blank contamination, if any, was therefore subtracted from the corresponding samples to ensure that the reported concentrations originate from the actual sample and not the backgrounds of the overall preparation procedure. Procedural blank results obtained in the present survey have been appended to this report in **Tables S5-S6** of the Annex. PFPeA and PFOA were reported in **WP1** procedural blanks analyzed within the first UHPLC-MS sequence (i.e., procedural blanks #1 through #6), yet remained at low and reproducible levels (e.g., 0.027±0.004 ng for PFOA). PFBA was observed in 3 out of 4 instances in **WP1** procedural blanks analyzed in the second UHPLC-MS sequence (i.e., procedural blanks #7 through #10); however, such PFBA levels remained below the reported instrumental limit of quantification (iLOQ). None of the other targeted PFASs were detected in **WP1** procedural blanks #1 through #10. **WP1** procedural blanks analyzed within the last UHPLC-MS sequence (i.e., #11 through #37) did not show any detectable PFASs (**Table S5**). Procedural blanks were also performed for migration tests (**Table S6**). PFOA was the only analyte detected (0.12±0.013 ng) in **WP2** laundry procedural blanks, while 6:2 FTSA was the only analyte detected (0.026±0.004 ng) in **WP3a** artificial saliva procedural blanks. Procedural blanks executed within the **WP3b** artificial sweat procedure showed detectable levels only for PFBA and 6:2 FTSA (0.08±0.013 ng and 0.018±0.005 ng, respectively), at levels near to or below their respective iLOQ.

For quantification purposes, PFAS calibration curves were run within each analytical sequence. The calibration curve levels (prepared just before LC-MS injection) were constructed by adding incremental amounts of native PFASs, while the spiked amounts of surrogate standards and internal

standard were kept constant. Native PFASs in the calibration curve were spiked at ten levels (0.025, 0.05, 0.1, 0.2, 0.5, 2, 5, 10, 20 and 40 ng mL^{-1}). The inverse-weighted linear regressions were constructed by plotting the relative response ratio (area ratio of native analyte to surrogate standard) (A_N/A_{SS}) as a function of relative amounts added (mass ratio of native analyte to surrogate standard) (m_N/m_{SS}). Seven– to ten–point-based calibration curves were constructed, the linearity range covering usually more than 3 orders of magnitude (0.025–40 ng mL^{-1}). Note that the actual linearity range of the method may extend beyond the last calibration curve level tested of 40 ng mL^{-1}. Suitable coefficients of determination were obtained for all analytes (R^2 range = 0.9960–0.9999) (see also **Table S7** of the Annex for details). Accuracy and precision were evaluated in samples prepared in quintuplicates at two concentration levels (i.e., 1 ng mL^{-1} and 25 ng mL^{-1}) that were not previously included in the calibration curve regression, and proved satisfactory (see **Table S8** of the Annex). The quantity of each individual PFAS recovered from the clothes, apparel, or children's items (m_N') was determined by considering the relative response observed in the actual samples (A_N'/A_{SS}'), divided by the slope of the inverse-weighted linear regression ($A_N/A_{SS} = f(m_N/m_{SS})$), further multiplied by the amount of surrogate standard initially spiked to the items (m_{SS}'). The concentration in the given item was then derived by dividing the determined amount (in ng) by the initial sample intake (in g or m^2, depending on the desired unit). Since the surrogate standards were spiked to the samples prior to extraction, and due to the particular design of the calibration curve, the potential differences associated with recovery losses were accounted for and corrected through the quantification procedure. The internal standard (added to the samples just prior LC-MS analysis) was only used to control the possibility of matrix effects at the instrumental stage **[56]**. Within a given analytical sequence, low-level spiked controls (1 ng mL^{-1}) were also analyzed every 5 or 6 samples to monitor the stability of retention times, response ratios (A_N/A_{SS}), and accuracy performance. An illustration of the quality control chart approach implemented during the present survey is provided in the Annex (**Figure S4**) (see also **Table S9**).

Instrumental limits of detection (iLODs) were derived from the calibration regression (considering the 5 lowest concentrations of the linear range) as 3.3 times the standard error on the y-intercept divided by the slope of the inverse-weighted linear regression ($A_N/A_{SS} = f(m_N/m_{SS})$), further multiplied by the quantity of surrogate standards spiked to the calibration curve levels (m_{SS}), corrected by the final volume (modified from **[47]** and **[54]**). iLODs ranged between 0.005 and 0.1 ng mL^{-1} (see also **Table S10** of the Annex for details on compound-specific iLODs). Instrumental limits of quantification (iLOQs) were set at the first calibration curve level of the linearity range. iLOQs ranged between 0.025 and 0.2 ng mL^{-1} for the targeted analytes (see also **Table S10** of the Annex). Method limits of detection (LOD, ng g^{-1}) and method limits of quantification (LOQ, ng g^{-1}) were estimated by similar methodologies, but based on the average sample intake (1 g).

Results and Discussion

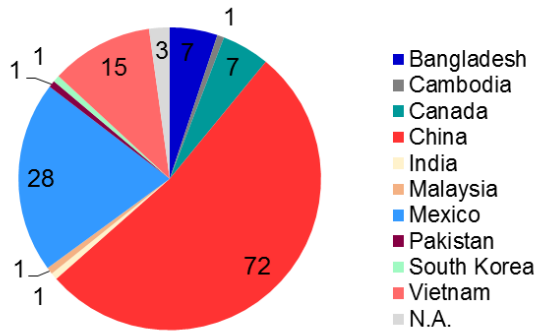
Overview of sample characteristics

A total of 137 items were received at UdeM laboratory facilities (Canada: n = 43; Mexico: n = 46; US: n = 48) (see also **Table 1**). The brand could be identified in 97% of the items purchased, which represented a total of 88 different brands. The items originated from at least ten different countries of manufacture. Roughly half (53%) of the items purchased were originally manufactured in China (see also **Figure 1**). The breakdown per item category and country of purchase is also apparent in **Table 1**.

The different items encompassed a wide range of fabric types, including cotton, ethylene-vinyl acetate (EVA), polyamide (nylon)-coated polyurethane, polyester, polyvinyl chloride (PVC), and vinyl-coated polyester. Gloves were characterized by quite heterogeneous compositions (e.g., Nylon/Elastane, Nitrile/Nylon/Lycra).

Particularly durable water repellent finishing, coatings or high-performance membranes were specified on labels of approximately 10% of the items purchased. Such items were generally in the higher price ranges.

Figure 1. Country of manufacture for the 137 purchased items (number of articles per country).



PFAS occurrence and levels in the solvent-extractable fraction

Overall, 97 items (68.6%) yielded positive detections in the PFAS solvent-extractable screening (**WP1**) (**Table 3**). Out of the 31 target PFASs, 29 analytes were quantified in at least one sample (**Table 4**). Perfluorodecane sulfonate (PFDS) was the only target analyte not detected across all analyzed items. Detection frequencies of occurrence for individual PFASs ranged between 0 and 45% (**Table 4**). Note that based on the data distribution per country, sample CEC_126 from Mexico—whose $\sum_{31}$PFAS surpassed the second-highest $\sum_{31}$PFAS from Mexico by a factor of ~10 (on a weight basis)—was excluded from the calculations of median/average per country (e.g., **Table 3**). Note, though, that sample CEC_126 was considered when deriving descriptive statistics based on the overall dataset (n = 137) (e.g., **Tables 4-5**).

Table 3. Overview of results for the items analyzed in the WP1 screening

	Items analyzed n	Positive items n (%)	Median Σ_{31}PFAS ng g^{-1} | µg m^{-2}	Maximum Σ_{31}PFAS ng g^{-1} | µg m^{-2}
Canada	43	37 (86%)	6.1 | 0.91	780 | 210
Mexico	46	24 (52%)	0.11* | 0.05*	35* | 27*
United States	48	33 (69%)	0.44 | 0.12	62 | 15
Overall	**137**	**94 (68.6%)**	**0.50 | 0.18**	**780 | 210**

*Excluding sample CEC_126 of Σ_{31}PFAS = 300 ng g^{-1} (or 97 µg m^{-2}), representing a piece of flame retardant-treated fabric used in the manufacturing of flame-resistant workwear in Mexico.

The most frequently detected PFASs were PFOA (45%) and PFHxA (43%). Other recurrently detected PFASs included perfluoroalkyl carboxylates such as PFBA (31%), PFDA (30%), PFHpA (29%), PFNA (26%), PFPeA (23%), and PFDoA (17%), as well as fluoroalkyl sulfonates, including PFBS and 6:2-FTSA (18% each). Perfluorooctane sulfonate (PFOS) was detected in 16% of the items, and quantified in less than $1/7^{th}$ of the items. These relatively low PFOS occurrence values are in agreement with recent trends for outdoor articles of clothing, including studies from Gremmel et al. **[41]** (5/16 positives) or Hanssen and Hertzke **[39]** (0/18 positives), although in the latter case the lack of detectable PFOS levels may be related to higher method reporting limits (i.e., ~0.15 µg m^{-2} versus ~0.01 µg m^{-2} for studies **[39]** and **[41]**, respectively).

Interestingly, PFCAs bearing an even number of carbon atoms (i = 2p, where 'i' refers to the total number of carbon atoms and p is a nonnegative integer) displayed higher frequencies of occurrence than their vicinal uneven carbon-numbered analogs (i = 2p+1 or 2p-1), and more particularly for the long-chain PFCAs (p≥4) for instance PFDA(C_{10})>PFUnA(C_{11}), PFUnA(C_{11})<PFDoA(C_{12})>PFTrDA(C_{13}), and PFTrDA(C_{13})<PFTeDA(C_{14}). Similar trends could be detected in the work of Hanssen and Herzke **[39]**, wherein C_{11} and C_{13} PFCAs systematically remained below method reporting limits while even carbon-numbered analogs (C_{10}, C_{12}, and C_{14}) were variously quantified in a series of outdoor textiles and gear (**Table 5**). Analogous trends regarding frequencies of occurrence were also apparent in outdoor textile samples analyzed by Kotthoff et al. **[40]** or outdoor jackets analyzed by Gremmel et al. **[41]** (i.e., in both instances, $C_{10}>C_{11}$, $C_{11}<C_{12}>C_{13}$ and $C_{13}<C_{14}$).

The sum of 31 target PFASs (Σ_{31}PFAS) was in the range 0.03–780 ng g^{-1} on a weight basis and 0.01–212 µg m^{-2} on a surface area basis for the positive items (**Table 3**). The maximum observed values are in the same order of magnitude as those of Gremmel et al. **[41]** in outdoor jackets, or those of the Danish EPA **[38]** across variable articles of protective clothing (∑PFAS of 0.03–719 µg m^{-2} and 18–407 µg m^{-2}, respectively), although certain differences in the lists of targeted PFASs may preclude a direct comparison. Based on overall descriptive statistics (n = 137), the median Σ_{31}PFAS was ~0.50 ng g^{-1} on a weight basis and 0.18 µg m^{-2} on a surface area basis (**Table 3**). Σ_{31}PFAS concentrations of 1 ng g^{-1}, 5 ng g^{-1}, and 10 ng g^{-1} were surpassed by 43%, 27% and 17% of the items, respectively. The ninth decile threshold (90% of the tested items) was reached at 30 ng g^{-1} (10 µg m^{-2}). Only 6 of the 137 items (~5%) displayed Σ_{31}PFAS concentrations that surpassed 100 ng g^{-1}.

Individual PFASs generally remained at low levels across the various items, average concentrations (n = 137) ranging from <LOD to 5.6 ng g^{-1}. Out of the 31 targeted PFASs, only 7 displayed average concentrations higher than 1 ng g^{-1}: PFBS (5.6 ng g^{-1}), PFBA (2.4 ng g^{-1}), PFOA (2.1 ng g^{-1}), PFHxA (1.7 ng g^{-1}), 10:2 FTCA (1.7 ng g^{-1}), 6:2 FTCA (1.1 ng g^{-1}), and PFDA (1.1 ng g^{-1}).

Table 4. Summary statistics of the 31 target PFASs across the 137 items surveyed

	LOD* ng g^{-1}	**LOQ*** ng g^{-1}	**Detection Frequency** (% ≥LOD)	**Quantification Frequency** (% ≥LOQ)	**Range** ng g^{-1}
PFBA	0.04	0.15	31	23	<LOD-120
PFPeA	0.01	0.07	23	20	<LOD-4.2
PFHxA	0.01	0.04	43	43	<LOD-61
PFHpA	0.01	0.07	29	29	<LOD-11
PFOA	0.01	0.04	45	45	<LOD-78
PFNA	0.01	0.04	26	26	<LOD-16
PFDA	0.01	0.04	30	30	<LOD-42
PFUnA	0.01	0.04	8.0	8.0	<LOD-3.7
PFDoA	0.01	0.07	17	17	<LOD-9.8
PFTrDA	0.01	0.07	2.9	2.9	<LOD-0.7
PFTeDA	0.01	0.04	14	14	<LOD-2.6
PFHxDA	0.01	0.04	11	11	<LOD-0.24
PFOcDA	0.03	0.07	1.5	1.5	<LOD-0.17
PFBS	0.01	0.04	18	15	<LOD-420
PFHxS	0.01	0.04	8.8	7.3	<LOD-2.7
PFHpS	0.01	0.04	2.9	2.9	<LOD-7.4
PFOS	0.01	0.07	16	13	<LOD-11
PFDS	0.03	0.07	0	0	<LOD
6:2 FTCA	0.15	0.3	2.2	2.2	<LOD-120
8:2 FTCA	0.15	0.3	5.8	4.4	<LOD-66
10:2 FTCA	0.15	0.3	5.1	5.1	<LOD-210
4:2 FTSA	0.01	0.04	4.4	0	<LOQ
6:2 FTSA	0.01	0.04	18	17	<LOD-31
8:2 FTSA	0.01	0.04	11	6.6	<LOD-20
10:2 FTSA	0.01	0.04	5.8	4.4	<LOD-20
6:2 FTUA	0.01	0.07	3.6	3.6	<LOD-18
8:2 FTUA	0.01	0.07	5.8	4.4	<LOD-1.4
10:2 FTUA	0.01	0.07	9.5	8.0	<LOD-18
FOSA	0.01	0.04	2.2	2.2	<LOD-0.86
MeFOSA	0.03	0.15	2.2	0.7	<LOD-0.30
EtFOSA	0.03	0.15	0.7	0.7	<LOD-0.20

*Indicative method LOD and LOQ derived on the basis of an average sample intake of 1 g.

Table 5. Range of long-chain perfluoroalkyl acids in articles of clothing with concentrations ≥ LOQ

	Present study Overall dataset, n = 137 μg m^{-2} (quantified n out of 137)	**Hanssen & Herzke [39]** Outdoor textiles and gear, n = 18 μg m^{-2} (quantified n out of 18)	**Gremmel et al. [41]** Outdoor jackets, n = 16 μg m^{-2} (quantified n out of 16)
PFOA	0.02–99 (62/137)	0.09–3.1 (9/18)	0.02–171 (16/16)
PFNA	0.004–12 (36/137)	0.19–0.21 (2/18)	0.02–28 (14/16)
PFDA	0.01–14 (41/137)	0.15–1.47 (3/18)	0.07–85 (13/16)
PFUnA	0.02–2.8 (11/137)	- (0/18)	0.36–20 (3/16)
PFDoA	0.01–3.4 (23/137)	0.16–0.76 (2/18)	0.13–81 (6/16)
PFTrDA	0.02–0.22 (4/137)	- (0/18)	0.03–3.7 (4/16)
PFTeDA	0.01–1.1 (19/137)	0.25 (1/18)	0.01–21 (7/16)
PFOS	0.006–3.6 (18/137)	- (0/18)	0.01–0.54 (5/16)

With an average concentration of 0.12 ng g^{-1}, PFOS only ranked 18th among the list of 31 targeted PFASs. Note that for the purpose of calculating average concentrations, non-detects (i.e., data < LOD) were treated as 0 x LOD; the average therefore refers to the overall dataset (i.e., not only the positive items) **[54]**. PFOS levels also remained within a rather limited range of values. With the exception of one particular sample (11 ng g^{-1} or 3.6 μg m^{-2}), PFOS concentrations consistently remained below 1 ng g^{-1} or 0.5 μg m^{-2}. This is compliant, for instance, with the European Union Textile Restricted Substance List, which sets a limit on PFOS residues of 1.0 μg m^{-2} **[57]**. Such low PFOS levels across articles of clothing from different markets (Canada, Mexico, and the United States) and various countries of manufacture covering Eastern Asia, Canada, and Mexico (**Figure 1**) seem to confirm the reports on the efficient implementation of PFOS regulations in various sectors, including the textile industry (e.g., shift toward C_4-based analogs for certain fabric protector spray formulations) **[58]**.

When considering the items of Σ_{31}PFAS > 0.5 ng g^{-1} (n = 67/137), PFOS represented on average a small fraction (~1.1%) of the Σ_{31}PFAS (maximum ~18%). In items of Σ_{31}PFAS > 50 ng g^{-1} (n = 9/137), PFOS was either not detected at all (5 out of 9 items) or represented only a limited proportion of the PFAS composition profiles (0.024–6.8% of Σ_{31}PFAS). Perfluorobutane sulfonate (PFBS) and PFCAs of diverse chain lengths, in contrast, were the major contributors to the PFAS profiles in such samples. The results reported herein are in overall good agreement with PFAA profiles previously described for outdoor textiles **[39,40,41]**, gloves **[40]**, and leather **[40]**. While on average (n = 137) the levels of PFBS and PFCAs remained well below the 20.0 μg kg^{-1} (20 ppb) guideline set by the European Union Textile Restricted Substance List for other PFASs **[57]**, exceedances were occasionally reported for particular samples. Out of the 137 purchased items, only 7 (~5%) showed at least one target PFAS analyte (maximum: 5 analytes) above the 20.0 μg kg^{-1} guideline value. Possible factors for such exceedances will be tentatively discussed in the following section on market variation and item category.

It is noteworthy that once again, both the short-chain (C_4-C_7) and long-chain (C_8-C_{14}, C_{16}, C_{18}) PFCAs were detected across the items surveyed. In order to compare the trends between these two subsets, we attempted to calculate the concentration ratio (Q_{PFCA}) of total short-chain PFCAs divided by those of total long-chain PFCAs (i.e., $Q_{PFCA} = \Sigma_{C4\text{-}C7}$PFCA / $\Sigma_{C8\text{-}C18}$PFCA). Considering the items that had quantifiable levels of at least one analyte from each of the two subsets (i.e., $\Sigma_{C4\text{-}C7}$PFCA ≥ LOQ and $\Sigma_{C8\text{-}C18}$PFCA ≥ LOQ), the quotient Q_{PFCA} could be calculated in 53 instances. $\Sigma_{C4\text{-}C7}$PFCA to $\Sigma_{C8\text{-}}$

$_{C18}$PFCA ratios varied 4 orders of magnitude (range: 0.01–135) and the median short-chain to long-chain PFCA ratio was 0.315. From the data analysis, it was not possible to confirm (or dispel) an increasing use of short-chain PFCAs—albeit, strictly speaking, it would have been necessary to compare articles collected over a much longer time period for this purpose. Out of the 5 highest ratios, 3 particular items displayed elevated total perfluoroalkyl carboxylate concentrations (i.e., ratios of 111, 21, and 135 for items of ΣPFCA = 92 ng g^{-1}, 260 ng g^{-1}, and 420 ng g^{-1}, respectively).

A similar short-chain versus long-chain concentration ratio comparison could not be performed for PFSAs because of the reduced number of items fulfilling the ≥LOQ criterion for both subsets. Out of the 10 most contaminated samples with regard to ΣPFSA (i.e., 7 items between 1.6–11 ng g^{-1}, and 3 items > 92 ng g^{-1}), the half presented predominantly short-chain PFSA (i.e., PFBS) contributions of 99.96% or higher to the total PFSA profile, while the other half presented an opposite trend (i.e., Σ_{C6-C10}PFSA relative abundances of 96.7–100% to the PFSA profile). It should be highlighted, however, that the 3 items that displayed maximum ΣPFSA levels (range: 92–420 ng g^{-1}) also displayed a maximum contribution of PFBS. These findings are in agreement with previous reports that indicated a shift of certain industries from PFOS (C_8) to shorter-chained analogs, such as perfluorobutane sulfonyl urethane chemistry (not targeted in the present survey) and PFBS (C_4)—for instance, in fabric protector sprays for carpets (e.g., 3M's Scotchgard®) **[58]**.

As was mentioned earlier, long-chain PFCAs with even carbon numbers were more *frequently detected* than their vicinal, uneven-carbon-numbered analogs. A similar observation, in fact, applied to *concentration levels*, both in the present survey and in earlier studies targeting similar items **[38–41]**. For instance, average concentrations of long-chain PFCAs on the overall dataset (n = 137) ranked as PFDA>PFUnA (1.1 versus 0.08 ng g^{-1}), PFUnA<PFDoA>PFTrDA (0.08, 0.24, and 0.01 ng g^{-1}, respectively), and PFTrDA<PFTeDA (0.01 versus 0.07 ng g^{-1}). Similar trends were apparent in the descriptive statistics (such as maximum and median) of the Gremmel et al. **[41]** dataset on outdoor textiles, as well as in reported concentration ranges of outdoor textiles from various studies **[38–40]** (see also **Table 5**). Since our data analysis indicates the same observable trend in the present survey and several other studies on articles of clothing **[38–41]**, this is unlikely to be coincidental and could reflect the variations in the formulations applied to the textiles.

Trends regarding market variation and item category

To facilitate a preliminary assessment of the influence of market variation on PFAS levels across articles of clothing and performance apparel in North America, the purchased items were grouped by country of purchase. Of course, the trends discussed here should be interpreted with caution in view of the relatively small sample size per country (n = ~40–50) that likely renders the datasets quite susceptible to the effect of outliers. In addition, variability in the proportion of samples per product category, country of origin, brand, and price-point, compounded by lower detection frequencies for several of the target analytes, could contribute to obscuring the patterns regarding inter-country differences. For these reasons, no strict ranking could be established between the three countries as regards PFAS content in textile items. The proportion of positive samples was 37/43, 24/46, and 33/48 for Canada, Mexico, and the United States, respectively (**Table 3**). The median Σ_{31}PFAS was about one order of magnitude higher in samples from Canada (6.1 ng g^{-1} or 0.91 µg m^{-2}) than in those from Mexico (0.11 ng g^{-1} or 0.05 µg m^{-2}) or the United States (0.44 ng g^{-1} or 0.12 µg m^{-2}) (**Table 3**).

The country breakdown per concentration class, as shown in **Tables 6-7**, pointed to similar observations. **Table 6** presents the Σ_{31}PFAS on a weight basis (ng g^{-1}), while **Table 7** presents the data on a surface area basis (µg m^{-2}). As evidenced in **Table 6**, concentration class #1 (<LOQ) grouped the largest number of items in the case of Mexico (22/46) and the United States (15/48),

while for Canada concentration class #5 (5–19.9 ng g^{-1}) grouped the most items (14/43). When considering the 41 items with Σ_{31}PFAS of 1.0 µg m^{-2} or higher (i.e., concentration classes #5 through #7), those purchased in Canada accounted for about half (51%) of this subset, while the ones purchased in the United States or Mexico represented 32% and 17%, respectively (**Table 7**).

As was mentioned earlier, certain limitations could preclude drawing definite between-country comparisons. The relatively small sample size per country is one obvious limitation, but there exist other sources of bias. For instance, high performance cycling jackets were found to be among the categories with the highest target PFAS concentrations, but such items were only sampled in Canada. A discrepancy could also be noted regarding the number of items per category for each country, such as high-performance clothing (including outdoor jackets or snowsuits) between Canada or the United States on the one hand (n =13 and 10, respectively), and Mexico on the other hand (n = 3)—items that expectedly contain significant PFAS levels **[41]**. Notwithstanding this fact, it should be stressed once again that the choice of items was made as much as possible in accordance with local relevance. Snowsuits and premium quality outdoor jackets, for instance, would be arguably of lower relevance to inhabitants of Mexico than those of Canada, where articles of protective clothing are used a significant part of the year. Such items would also typically be less accessible to consumers in Mexico—at least regarding in-shop purchases. When arranging items by country of manufacture rather than by country of purchase, the median (and maximum) Σ_{31}PFAS ranged by more than 2 orders of magnitude (**Table 8**), but a larger sample size per country of manufacture would be necessary to confirm this preliminary observation. Since item category could have a major impact on the PFAS levels and profiles **[40]**, a specific discussion of results per item category was further conducted.

Table 6. Distribution of items by total PFAS concentration ranges (weight basis) per country of purchase

	Number of samples arranged per concentration class*						
Concentration class	#1	#2	#3	#4	#5	#6	#7
Concentration range (ng g-1)	<LOQ	LOQ–0.49	0.50–0.99	1.0–4.9	5.0–19.9	20–100	>100
Canada	6	8	2	5	14	3	5
Mexico	22	8	3	9	2	1	1
United States	15	11	3	8	8	3	0
Total	**43**	**27**	**8**	**22**	**24**	**7**	**6**

*Total target PFAS concentration (Σ_{31}PFAS, ng g^{-1}).

Table 7. Distribution of items by total PFAS concentration ranges (surface area basis) per country of purchase

	Number of samples arranged per concentration class*						
Concentration class	#1	#2	#3	#4	#5	#6	#7
Concentration range (µg m^{-2})	<LOQ	LOQ–0.19	0.20–0.49	0.50–0.99	1.0–4.9	5.0–19.9	>20
Canada	6	9	4	3	12	1	8
Mexico	22	8	6	3	5	0	2
United States	15	11	4	5	7	6	0
Total	**43**	**28**	**14**	**11**	**24**	**7**	**10**

*Total target PFAS concentration (Σ_{31}PFAS, µg m^{-2}).

Table 8. Summary statistics with regard to country of manufacture

Country of manufacture*	Minimum $\sum_{31}$PFAS (ng g^{-1})	Maximum $\sum_{31}$PFAS (ng g^{-1})	Average*** $\sum_{31}$PFAS (ng g^{-1})	Median $\sum_{31}$PFAS (ng g^{-1})	Number of items of $\sum_{31}$PFAS >5ng/g
Bangladesh (n = 7)	0.14	14	3.2	0.61	2/7 (29%)
Canada (n = 7)	0.068	470	118	35	6/7 (86%)
China (n = 72)	<LOD	780	18	0.24	17/72 (24%)
Mexico (n = 27**)	<LOD	35	1.7	0.13	1/27 (4%)
Vietnam (n = 15)	0.47	62	12	6.7	9/15 (60%)

*Countries with n<7 are not shown in this Table.
**Excluding sample CEC-126 of 300 ng g^{-1} representing a piece of flame retardant fabric used to make flame-resistant workwear in Mexico.
***For the purpose of calculating average concentrations, non-detects (i.e., data < LOD) were treated as 0 x LOD.

This subsection briefly reports on the influence of item category with regard to PFAS trends. **Table 9** shows the PFAS summary statistics for the main item categories; note that categories presenting a very small sample size (i.e., n<3) were not included in this table. Regardless of market destination (childrenswear or adults wear, country of purchase), outdoor jackets (n = 31) displayed a remarkable proportion of 100% positive detections (i.e., Σ_{31}PFAS ≥ LOD). Rainsuits (i.e., rain ponchos or rainsuits) showed a much lower proportion of positive items, at only 6/19 (32%) and 7/16 (44%) for adults and children, respectively. All four samples that featured a waterproof baby mat, pad or blanket showed at least one quantifiable PFAS out of the 31 targeted analytes, while about half (48%) of the baby/Children's bib items were positive. One baby bib item purchased in Canada displayed detectable PFAS levels for 9/31 analytes and $\sum_{31}$PFAS levels of 16 ng g^{-1} (the maximum for this category); note that the item advertised to be Lead-free, BPA-free, PVC-free & phthalate-free, which could make it more attractive to consumers. Sport gloves for cycling or weightlifting, waterproof trousers, and winter gear (snowsuits, winter gloves) were the remaining categories with a high proportion of positive items (90–100%). Interestingly, articles billed as "fire retardant" or "flame resistant" also showed detectable PFAS levels in 3 out of 4 cases; additionally, such items could be expected to contain brominated flame retardants **[5,49,59]**. The three major categories with the highest proportion of items of $\sum_{31}$PFAS > 5 ng g^{-1} were the following: adult outdoor jackets (65%), waterproof trousers (50%), and children's outdoor jackets (36%) (**Table 9**). Out of the six items of $\sum_{31}$PFAS > 100 ng g^{-1}, three pertained to the adult outdoor jacket category (130–780 ng g^{-1}), two to sport jackets for cycling (160–470 ng g^{-1}), and the last one was the piece of flame resistant fabric (300 ng g^{-1}) from Mexico used in the manufacturing of flame-resistant workwear. Interestingly, out of the six items with the highest $\sum_{31}$PFAS concentration, three were originally manufactured in Canada, one in Mexico, and the other two in China. While grouping samples per item category was useful for singling out the classes of items that had the highest $\sum_{31}$PFAS concentrations, the application of special treatments could be an additional confounding factor (see also the next paragraphs for details).

Table 9. Descriptive statistics of $\sum_{31}$PFAS, arranged per item category

	Proportion of positive items	Items with $\sum_{31}$PFAS ≥5 ng g^{-1}	Median $\sum_{31}$PFAS ng g^{-1}	Maximum $\sum_{31}$PFAS ng g^{-1}
Adult Outdoor Jackets	20/20 (100%)	13/20 (65%)	6.4	780
Adult Rainsuits	6/19 (32%)	0/19 (0%)	<LOQ	3.0
Waterproof baby mats, pads, blankets	4/4 (100%)	1/4 (25%)	1.7	12
Baby/Children's bibs	14/29 (48%)	1/29 (3%)	<LOQ	16
Children's Outdoor Jackets	11/11 (100%)	4/11 (36%)	2.6	62
Children's Rainsuits	7/16 (44%)	3/16 (19%)	<LOQ	61
Fire retardant / Flame resistant*	2/3 (66%)	1/3 (33%)	0.4	14
Miscellaneous bed linens	1/3 (33%)	0/3 (0%)	<LOQ	1.3
Snowsuits, Winter gloves	10/11 (91%)	3/11 (27%)	1.4	79
Cycling gloves, Weightlifting gloves	3/3 (100%)	1/3 (33%)	3.9	8
Waterproof trousers	9/10 (90%)	5/10 (50%)	6.3	39

Categories of very small sample size (n<3) are not shown in this table. *Excluding sample CEC_126 of 300 ng g^{-1} (or 97 µg m^{-2}) representing a piece of flame retardant fabric used to make flame-resistant workwear in Mexico.

As mentioned earlier, particular items were signaled for an especially durable water repellent finishing, coating, or high-performance membrane, including Gore-Tex™, Outech®, Pertex®, Polartec®, Scotchlite®, and Teflon™. While the collection of items from other registered trademarks was rather randomly pursued, the technologies from 3M and Dupont were initially targeted in the sampling design because it was thought that detectable PFAS levels were likely to be found there, although the experimental observations would suggest that this view should be nuanced.

The product description of two cycling jackets (having the same brand name and both manufactured in Canada) signaled the use of 3M/Scotchlite® technology, and in one of them the use of polytetrafluoroethylene could be confirmed in the composition ("Shell 100% Nylon laminated to PTFE; Backing 100% Nylon"; see also Data **D102** in the Annex). The two cycling jackets presented relatively high $\sum_{31}$PFAS levels (472 ng g^{-1} for the PTFE-laminated item, and 163 ng g^{-1} for the other item). Interestingly, the two items presented distinct PFAS profiles. Testing the PTFE-laminated cycling jacket in this study yielded an overwhelming contribution from short-chain perfluoroalkyl acids, especially the C_4- (PFBS: 246 ng g^{-1}, PFBA: 118 ng g^{-1}), and C_6- (PFHxA: 61 ng g^{-1}) analogues, while PFOA only represented a minor contribution to the $\sum_{31}$PFAS (<0.5%) and PFOS was not detected at all. The second cycling jacket, in contrast, showed a major contribution from the long-chain PFCAs, especially the C_8- (PFOA: 51 ng g^{-1}, or 31% of the $\sum_{31}$PFAS) and C_{10}- (PFDA: 42 ng g^{-1}, or 26% of the $\sum_{31}$PFAS) analogues. Also, note that PFOS and 8:2 FTSA contributed about 7% each to the $\sum_{31}$PFAS for this item.

Interestingly, in the case of the three items that were identified as having a Teflon™ protective membrane, the presence of PTFE could not be confirmed in either the product composition or the specific descriptions that came along with (e.g., "Teflon D/W/R"). Such Teflon items displayed relatively low $\sum_{31}$PFAS levels, at 0.26, 0.61, and 9 ng g^{-1}, respectively, for the snowsuit, adult outdoor jacket, and children's outdoor jacket with Teflon finishing. $\sum_{31}$PFAS levels below 1 ng g^{-1} could very well be due to background contamination (e.g., atmospheric deposition, contribution from dust, etc.) which could occur during the textile manufacturing process, the shipment from the country

of manufacture, or the time that elapsed between the items' reception in warehouses and/or shopping centers and their purchase for the analytical purposes of this project, rather than an actual contribution due to the particular technology. The outdoor jacket with Teflon™ coating that yielded $\sum_{31}$PFAS levels of 9 ng g^{-1} had quantifiable PFAS levels for 7 of 31 of the targeted analytes. The short-chain PFCAs yielded the major contribution, especially PFHxA (~40%). Hence, while the presence of PTFE in the product composition could be a good indicator for the occurrence of high PFAS levels, the mention of "Teflon" would not be necessarily predictive of high PFAS levels—at least for the 31 PFASs targeted in the present survey. Of course, Teflon™ could still refer to the use of polytetrafluoroethylene (PTFE) chemistry, as historically developed for such applications as non-stick coatings for cookware (e.g., Tefal or T-fal). It should be made clear, however, that Teflon™ now encompasses a whole range of different technologies used in various applications: some of the recent Teflon™ technologies may alternatively use fluoroethoxy polymers, and even nonfluorinated textile treatments (e.g., EcoElite) **[60]**. This may partly explain why the Teflon™ items analyzed in the present study showed relatively low $\sum_{31}$PFAS content.

Two adult outdoor jackets (of different brands) were identified as having a Gore-Tex™ membrane technology. These brand #1 and #2 jackets displayed relatively high $\sum_{31}$PFAS levels (180 and 780 ng g^{-1}, respectively) and very similar PFAS profiles, with a major contribution of PFBS (respectively, 50% and 54% of $\sum_{31}$PFAS). The other major contributions came from other short-chain PFASs, including PFBA (18% and 16% of $\sum_{31}$PFAS for items from brand #1 and #2), 6:2 FTCA (19% and 15%), PFHxA (6.1% and 6.9%), 6:2 FTUA (4.2% and 2.3%), and 6:2 FTSA (1.2% and 3.9%). The brand #1 item showed detectable levels of neither PFOS nor PFOA, while the latter compounds represented negligible contributions (<0.05%) in the brand #2 item, remaining at sub ng g^{-1} levels. A third sample was identified as having a Gore-Tex™ membrane (off-road biking gloves), but upon testing yielded a relatively low $\sum_{31}$PFAS (8.4 ng g^{-1}). Consistent with the previous observations for Gore-Tex™ outdoor jackets, the PFAS profile of the Gore-Tex™ sport gloves was dominated by short-chain PFASs, but this time the C_4-based PFCA, rather than C_4-PFSA, was the main contributor to the PFAS profile (PFBA = 54% of $\sum_{31}$PFAS).

Migration potential to laundry water

During their useful lives, textile items may be laundered, which generally involves mixing the material with water and detergent. The frequency of washing may depend on the item's category and use. These operations may result in the migration of the chemicals from the textile fabric to the diluted detergent solution **[49,53]**. The resulting water is then directed to sewers and wastewater treatment plants and, ultimately, to environmental waters that can in turn become a source for drinking water production. In the present study, the items examined for the migration tests to laundry water (**WP2**) were from the following categories: sport (cycling) jackets (n = 2), adult outdoor jackets (n = 2), and waterproof trousers (n = 1). The detailed PFAS concentrations determined to have migrated to laundry water are shown in **Table 10**. The lists of detected PFASs in **WP2** samples generally mirrored those of the earlier **WP1** assessment. For instance, C_4-C_8 PFCAs, PFBS, 6:2 FTSA, 6:2 FTCA, and 6:2 FTUA were detected in the laundry wash fractions of the two Gore-Tex™ jackets subjected to simulated washing, consistent with profiles reported for the organic solvent (MeOH) extractable fraction (**WP1**). The $\sum_{31}$PFAS in the wash fractions (normalized to the initial sample intake) ranged between 38–330 ng g^{-1}. The "comparative transfer ratios" $Q_{2/1}$ (i.e., concentration of PFASs characterized as per **WP2** divided by that from **WP1**) typically remained <1 and were quite consistent for a given item category. For instance, comparative transfer ratios of $\sum_{31}$PFAS for the Gore-Tex™ jackets were 0.57 and 0.42 for brand #1 and brand #2, respectively, while lower comparative transfer ratios were obtained for the two cycling jackets (0.16–0.23).

Table 10. PFAS concentrations (ng g^{-1}) determined in the laundry wash fractions.

	Outdoor Jacket Gore-TexTM - Brand #1 **CEC_050**	**Outdoor Jacket Gore-TexTM -** Brand #2 **CEC_149**	**Waterproof trousers CEC_080**	**Cycling Jacket CEC_130**	**Cycling Jacket PTFE CEC_131**
PFBA	19	69	4.1	0.5	11
PFPeA	0.7	1.6	5.1	0.6	<LOD
PFHxA	4.4	16	26	3.2	1.7
PFHpA	0.2	1.5	4.4	2.9	0.3
PFOA	<LOD	<LOD	7.1	18	0.7
PFNA	<LOD	<LOD	1.3	2.6	<LOD
PFDA	<LOD	<LOD	3.6	5.3	<LOD
PFBS	59	150	<LOD	<LOD	34
PFOS	<LOD	<LOD	<LOD	0.7	<LOD
6:2 FTS	1.3	9.4	0.2	0.4	<LOD
8:2 FTS	<LOD	<LOD	1.9	2.8	<LOD
6:2 FTCA	14	63	<LOD	<LOD	23
6:2 FTUA	4.7	17	<LOD	<LOD	6.2

Analytes that remained systematically <LOD across the 5 items considered are not shown in this table.

Migration potential to artificial saliva and artificial sweat

The exposure of consumers to non-volatile PFASs present in textiles may occur via ingestion and dermal absorption. As noted by the Danish EPA **[38]**, inhalation could also be a relevant pathway for particular classes of volatile PFASs (not targeted in the present survey), such as fluorotelomer alcohols (e.g., 8:2 FTOH) or perfluoroalkyl sulfonamidoethanols (e.g., FOSE) and their N-alkyl derivatives (e.g., MeFOSE) (note that none of these compounds was targeted in the present study). In the present study, in view of the list of targeted analytes, only ingestion and dermal absorption were considered for the migration assessment relevant to human health exposure. The screening realized in the first work package (**WP1**) was useful for determining a selection of items to be subjected to the migration tests, further based on the relevance of the item category to the migration pathway considered. The quantities of PFASs recovered from the simulated solutions were corrected (i.e., they were divided by the initial sample intake) to allow a comparison with the concentrations determined by solvent extraction as per **WP1** (i.e., comparative transfer ratios $Q_{3a/1}$ and $Q_{3b/1}$, defined by analogy with the previous section).

Two baby bibs, one children's rainsuit, and one waterproof baby-changing table mat were the items selected for the migration tests to artificial saliva (**WP3a**). The specific PFAS concentrations determined to have migrated to artificial saliva are shown in the Annex (**Table S11**). The $\sum_{31}$PFAS determined in the artificial saliva migration tests ranged between 0.50 and 7.8 ng g^{-1}; these total PFAS levels represented, on average, about half ($Q_{3a/1}$ = 0.53) of those determined by the MeOH extraction (**WP1**). These findings are also in agreement with those of the Danish EPA **[38]** (i.e., $Q_{3a/1}$ <1). Of note, the lists of detected PFASs in artificial saliva samples were in overall agreement with the results from the previous **WP1** assessment. For instance, in the first baby bib examined, the $\sum_{31}$PFAS was 7.0 ng g^{-1} in the artificial saliva (versus 16 ng g^{-1} as per **WP1**, i.e., $Q_{3a/1}$ = 0.43), and the two major analytes were PFHxA and PFOA, in agreement with results from the **WP1** assessment. However, the

comparative transfer ratios ($Q_{3a/1}$) appeared to be highly compound-dependent. In the first baby bib examined, the highest comparative transfer ratios were reported for short-chain PFCAs such as PFPeA (C_5, $Q_{3a/1}$ = 0.88), PFHxA (C_6, $Q_{3a/1}$ = 0.82), and PFHpA (C_7, $Q_{3a/1}$ = 0.77), while the long-chain PFCAs (C_8-C_{10}) exhibited typically lower comparative transfer ratios ($Q_{3a/1}$ = 0.42, 0.19, and 0.051 for PFOA, PFNA, and PFDA, respectively), providing evidence of lower migration efficiency of long-chain PFCAs to the equilibrating saliva solution compared to their shorter chained analogues. Similar trends were observed for the second baby bib, with higher comparative transfer ratios for PFHxA or PFOA (0.50–0.54) than for PFDA (0.26), as well as in the case of the children's rainsuit (C_6-C_7 ~0.50; C_8-C_9 ~0.30; C_{10}-C_{14} ~0.04 to 0.08). Taken together, these data suggest that only a limited proportion of the long-chain PFCAs determined in a solvent-extractable assessment (**WP1**) would be expected to migrate when equilibrated to artificial saliva (**WP3a**) (i.e., $Q_{3a/1}$<<1). The short-chain PFCAs, in contrast, would be more prone to desorb from the fabric into the artificial saliva. These findings are in line with those of the Danish EPA **[38]** who reported distinct PFASs in saliva migration liquid samples compared to the initial composition, the profiles being shifted to short-chain PFASs that are also more water-soluble.

The items examined for the migration tests to artificial sweat (**WP3b**) were from the following categories: adult outdoor jackets (n = 3), children's outdoor jackets (n = 2), cycling gloves (n = 1), children's gloves (n = 1), winter gloves (n = 1), and waterproof trousers (n = 3). The specific PFAS concentrations determined to have migrated to artificial sweat are shown in the Annex (**Table S12**). The $\sum_{31}$PFAS in the artificial sweat migration tests ranged from 0.04 to 100 ng g^{-1}, and represented only 1/5th on average ($Q_{3b/1}$ range: 0.032–0.60) of the initial $\sum_{31}$PFAS determined as per the organic solvent extractions (**WP1**). The two Gore-Tex^{TM} outdoor jackets showed comparative transfer ratios ($Q_{3b/1}$) of 0.29 and 0.13 for $\sum_{31}$PFAS. Consistent with our previous discussion for **WP3a**, comparative transfer ratios were compound-dependent and varied with chain length for PFCAs, the highest ratios being typically obtained for the short-chain compounds. Interestingly, the two Gore-Tex^{TM} items somehow differed from this rule. In the first Gore-Tex^{TM} jacket, while the comparative transfer ratios for C_4-C_7 PFCAs did decrease with increasing chain length (i.e., $Q_{3b/1}$ = 0.55, 0.33, 0.18, and 0.077 for PFBA, PFPeA, PFHxA, and PFHpA, respectively), a relatively high comparative transfer ratio was observed for the long-chain (C_{10}) analogue (i.e., 0.45 for PFDA). While an analytical artifact could not be discounted entirely, this hypothesis seems implausible at least for three reasons. First, within-sample heterogeneity—coincidentally leading to subsampling areas of the fabric with significantly different PFDA content between **WP1** and **WP3b**—would not be expected to overly affect the results because the jacket subsamples submitted to the work packages were each made of a composite sample from 3 different locations (hood, sleeve, and body) amounting to ~30 cm^2 in total, which should have attenuated this possibility. Second, procedural blanks were evaluated for each procedure (n = 37 for **WP1** and n = 3 for **WP3b**) and did not show any detectable presence of PFDA. Finally, the same phenomenon was observed for the second Gore-Tex^{TM} jacket (from another brand), with decreasing comparative transfer ratios for C_4(0.35)-C_7(0.039) PFCAs, to be compared to 0.24 for PFDA (C_{10}). Based on anticipated chain-length dependency, PFDA comparative transfer ratios would be expected to fall much lower than 0.07 or 0.04 (i.e., the relative transfer ratios of C_7 for the two jackets examined), unless the compounds were from a different origin (e.g., incorporation into the fabric at a different time or via a different process).

Limitations and perspectives

In view of the relatively small sample size (n ~40-50 per country), the trends in PFAS levels between the three markets should be viewed with caution. With such a small sample size and the somewhat disproportionate sampling design for certain item categories between the three countries, the risks of biasing the descriptive statistics due to outliers could not be ruled out. Even if a perfectly balanced sampling design had been attained between the three countries in terms of number of items per category, possible differences in fabric materials for a certain item type could be a confounding factor, obscuring patterns between countries. Future studies focusing on market difference should attempt to target the very same items in all three countries, if available, and perform a sufficiently high number of replicate purchases for each, to reduce the influence of outliers. Risks of lot-to-lot differences—even for the same item from the same provider and purchase location—could not be discounted, as is apparent in the wide difference in $\sum_{31}$PFAS levels observed for replicates of identical Gore-Tex™ outdoor jackets purchased at a single location (see also **Figure S5** of the Annex).

Another critical limitation lies in the complex nature of the samples and the analytical caveats that may accompany it. For the sake of cost-effectiveness, the quantification strategy relied on solvent-based calibration curves (prepared just prior to LC-MS analysis) rather than detailed standard additions for each textile sample (n = 137). Since the calculation of the method LOD and LOQ was derived from the solvent-based curves (but considering the final extract volume and initial sample intake), the estimated method LOD and LOQ therefore do not integrate potential recovery losses or matrix effects. No certified reference materials (CRMs) are currently available to assess the true recovery procedure for PFASs from textile articles. Even if there were, such CRMs would be made of a particular type of fabric, which may be quite different from the fabric of the samples from the present survey. This could preclude definite conclusions regarding extraction efficiency. The use of isotope-labeled surrogate standards (added to the samples at the start of analytical preparation) can, to some extent, compensate for variable recovery losses or matrix effects through isotopic dilution. However, such surrogate standards are typically applied to the items by spiking them in a small volume of organic solvent just a few hours prior to the start of the extraction, which may be quite different from the interactions of PFASs originally incorporated (sprayed/coated) into the fabric and equilibrating with the latter for weeks or months before sample collection and analysis. As such, the solvent-extractable fraction of a selected number of PFASs, as performed in **WP1**, is not necessarily equivalent to a total PFAS content.

In order to compare the results of the migration tests with those of the initial **WP1** assessment, no distinction was made between the lining and outer layers for multi-layered garments. While this approach would remain entirely valid with regard to the simulated laundry washing test (**WP2**), it might have been interesting to target the lining specifically in **WP3b**, since it is the inner surface of the fabric that is most likely to be in contact with sweat. The use of artificial saliva and sweat solutions (for **WP3a** and **WP3b**, respectively) may represent additional limitations. For instance, the composition of human saliva includes a diversity of enzymes and proteins **[61]**, which may give rise to different results than the standardized artificial saliva test of **WP3a**. Similar limitations may apply to artificial sweat in **WP3b**. Additionally, although glass beads were added to the samples to simulate the frictional aspects of laundering, mouthing, or physical activity for **WP2**, **WP3a**, and **WP3b**, respectively, this may not be entirely representative to actual friction and exposure.

Suggestions for future research to complement the results from the present survey would include additional testing of replicate purchases of particular items to evaluate the magnitude of between-samples (or lot-to-lot) differences of PFAS content, as well as evaluation and mitigation of possible methodological issues, including within-sample heterogeneity (affecting whole-method precision) and

matrix effects for certain complex materials (possibly affecting whole-method accuracy and/or detection limits). Further characterization of the solvent-extractable fraction of volatile PFASs (such as fluorotelomer alcohols) would certainly be useful, although the preservation may pose some limitations. Textiles could indeed be exposed to harsh conditions post-treatment (e.g., UV light, heat/humidity during their shipment, etc.) that could elicit losses of FTOHs via emission to the atmosphere and/or transformation reactions **[38,40]**. Finally, a recent study by Robel et al. established that even extensive lists of targeted non-volatile and volatile PFASs could vastly underestimate the total fluorine content (and presumably ∑PFAS as well) in samples of textiles and papers **[62]**. In light of these findings, future work involving the comprehensive sample library acquired during the present survey could investigate total fluorine in selected items, using complementary techniques such as particle-induced gamma ray emission (PIGE) spectroscopy **[62,63]** or combustion ion chromatography (CIC).

Conclusions

An overarching sampling campaign was conducted to document the levels and profiles of 31 per- and polyfluoroalkyl substances (PFASs) in protective clothing, apparel, and children's items across the three countries of North America. A total of 137 textile samples were purchased across 27 cities in Canada, Mexico, and the United States. The samples were first screened for their PFAS solvent-extractable fraction (using methanol as organic solvent). It is noteworthy that out of the 137 analyzed items, 96 (68.6%) showed positive results for at least one analyte. Individual detection frequencies of PFASs were in the range 0–45%, the most recurrently detected analytes being perfluorohexanoate (PFHxA) and perfluorooctanoate (PFOA). Both long-chain and short-chain perfluoroalkyl carboxylates were variously detected in the items, and represented a variable proportion of the sum of targeted PFASs (Σ_{31}PFAS). Perfluorooctane sulfonate (PFOS) was detected in 16% of the items and quantified in only 13%; besides, PFOS represented a minor contribution to the PFAS profiles. Overall, low PFAS levels were reported across the whole dataset (n = 137), with a median Σ_{31}PFAS of 0.50 ng g^{-1} on a weight basis and 0.18 µg m^{-2} on a surface area basis. This is lower, for instance, than the European Union guideline value of 1 µg m^{-2} for PFOS in textiles. Although a fairly even number of items were acquired from each country, no strict ranking of PFAS levels could be established between the three countries. Other important confounding factors of PFAS levels were item category and the indication of particular coatings. In this respect, outdoor jackets items (n = 20) presented the highest number of positive hits and presented the highest median Σ_{31}PFAS (6.4 ng g^{-1}). Although the mention of a durable water repellent membrane technology could be related to the detection of multiple PFASs in the corresponding items, it was not *per se* indicative of high PFAS levels—at least in the case of the 31 analytes targeted in the present survey. In a second phase, the potential of PFAS release relevant to human and environmental exposure was assessed for selected items. The first scenario assessed the leaching potential of PFASs from textiles under simulated laundry washing conditions. The second scenario considered the human exposure by contacting the materials with artificial saliva and simulated sweat aqueous solutions. While the lists of PFASs detected in the simulated solutions were in overall agreement with the ones determined by organic solvent extraction, the composition profiles tended to be shifted toward more water-soluble, short-chain PFASs.

Bibliography

[1] CEC. 2015. Strategic Plan of the Commission for Environmental Cooperation 2015–2020.

[2] CEC. 2008. The North American Mosaic: An Overview of Key Environmental Issues. Pollutants – Persistent Bioaccumulative Toxic Substances.

[3] Dewailly, E., Nantel, A., Weber, J.P., Meyer, F. 1989. High levels of PCBs in breast milk of Inuit women from Arctic Quebec. *Bulletin of Environmental Contamination and Toxicology* 43(5), 641–646.

[4] Ikonomou, M.G., Rayne, S., Addison, R.F. 2002. Exponential increases of the brominated flame retardants, polybrominated diphenyl ethers, in the Canadian Arctic from 1981 to 2000. *Environmental Science & Technology* 36(9), 1886–1892.

[5] CEC. 2015. Operational Plan 2015–2016–Project Description, Project 10: Greening of Chemicals Management in North America, 7 pp.

[6] CEC. 2015. *Enhancing Trilateral Understanding of Flame Retardants and Their Use in Manufactured Items: Analysis of Select Flame Retardants Contained in Office and Household Furniture*. Montreal, Canada: Commission for Environmental Cooperation. 16 pp.

[7] Buck, R.C., Franklin, J., Berger, U., Conder, J.M., Cousins, I.T., de Voogt, P., Jensen, A.A., Kannan, K., Mabury, S.A., van Leeuwen, S.P.J. 2011. Perfluoroalkyl and Polyfluoroalkyl Substances in the Environment: Terminology, Classification, and Origins. *Integrated Environmental Assessment and Management* 7(4), 513–541.

[8] Krafft, M.P., Riess, J.G. 2015. Selected physicochemical aspects of poly- and perfluoroalkylated substances relevant to performance, environment and sustainability – Part one. *Chemosphere*, 129, 4–19.

[9] Paul, A.G., Jones, K.C., Sweetman, A.J. 2008. A first global production, emission, and environmental inventory for perfluorooctane sulfonate. *Environmental Science & Technology* 43(2), 386–392.

[10] Lindstrom, A.B., Strynar, M.J., Libelo, E.L. 2011. Polyfluorinated compounds: past, present, and future. *Environmental Science & Technology* 45(19), 7954–7961.

[11] Houde, M., Martin, J.W., Letcher, R.J., Solomon, K.R., Muir, D.C.G. 2006. Biological monitoring of polyfluoroalkyl substances: a review. *Environmental Science & Technology* 40(11), 3463–3473.

[12] Kelly, B.C., Ikonomou, M.G., Blair, J.D., Surridge, B., Hoover, D., Grace, R. Gobas, F.A.P.C. 2009. Perfluoroalkyl contaminants in an Arctic marine food web: trophic magnification and wildlife exposure. *Environmental Science & Technology* 43(11), 4037–4043.

[13] Houde, M., De Silva, A.O., Muir, D.C.G., Letcher, R.J. 2011. Monitoring of perfluorinated compounds in aquatic biota: an updated review: PFCs in aquatic biota. *Environmental Science & Technology* 45(19), 7962–7973.

[14] Labadie, P., Chevreuil, M. 2011. Partitioning behaviour of perfluorinated alkyl contaminants between water, sediment and fish in the Orge River (nearby Paris, France). *Environmental Pollution* 159(2), 391–397.

[15] Müller, C.E., De Silva, A.O., Small, J., Williamson, M., Wang, X., Morris, A., Katz, S., Gamberg, M., Muir, D.C.G. 2011. Biomagnification of perfluorinated compounds in a remote

terrestrial food chain: lichen–caribou–wolf. *Environmental Science & Technology* 45(20), 8665–8673.

[16] Wolf, C.J., Schmid, J.E., Lau, C., Abbott, B.D. 2012. Activation of mouse and human peroxisome proliferator-activated receptor-alpha (PPARα) by perfluoroalkyl acids (PFAAs): further investigation of C4–C12 compounds. *Reproductive Toxicology* 33(4), 546–551.

[17] Rich, C.D., Blaine, A.C., Hundal, L., Higgins, C.P. 2015. Bioaccumulation of perfluoroalkyl acids by earthworms (*Eisenia fetida*) exposed to contaminated soils. *Environmental Science & Technology* 49(2), 881–888.

[18] Munoz, G., Budzinski, H., Babut, M., Drouineau, H., Lauzent, M., Le Menach, K., Lobry, Selleslagh, J., Simonnet-Laprade, C., Labadie, P. 2017. Evidence for the Trophic Transfer of Perfluoroalkylated Substances in a Temperate Macrotidal Estuary. *Environmental Science & Technology* 51(15), 8450–8459.

[19] Blum, A., Balan, S.A., Scheringer, M., Trier, X., Goldenman, G., Cousins, I.T., Diamond, M., Fletcher, T., Higgins, C.P., Lindeman, A.E., Peaslee, G., de Voogt, P., Wang, Z., Weber, R. 2015. The Madrid statement on poly-and perfluoroalkyl substances (PFASs). *Environmental Health Perspectives* 123(5), A107–A111.

[20] 2010/2015 PFOA Stewardship Program, United States Environmental Protection Agency, Washington, DC.

[21] 2010/2015 Environmental Performance Agreement Respecting Perfluorinated Carboxylic Acids (PFCAs) and their Precursors in Perfluorochemical Products Sold in Canada. Environment and Climate Change Canada. Available at: <https://www.ec.gc.ca/epe-epa/default.asp?lang=En&n=AE06B51E-1>.

[22] Prohibition of Certain Toxic Substances Regulations, 2012. Available at: <http://ec.gc.ca/lcpe-cepa/eng/regulations/DetailReg.cfm?intReg=207>.

[23] Olsen, G.W., Burris, J.M., Mandel, J.H., Zobel, L.R. 1999. Serum perfluorooctane sulfonate and hepatic and lipid clinical chemistry tests in fluorochemical production employees. *Journal of Occupational and Environmental Medicine* 41(9), 799–806.

[24] Gomis, M.I., Vestergren, R., Nilsson, H., Cousins, I.T. 2016. Contribution of direct and indirect exposure to human serum concentrations of perfluorooctanoic acid in an occupationally exposed group of ski waxers. *Environmental Science & Technology* 50(13), 7037–7046.

[25] Worley, R.R., Moore, S.M., Tierney, B.C., Ye, X., Calafat, A.M., Campbell, S., Woudneh, M.B., Fisher, J. 2017. Per- and polyfluoroalkyl substances in human serum and urine samples from a residentially exposed community. *Environment International* 106, 135–143.

[26] Olsen, G.W., Mair, D.C., Lange, C.C., Harrington, L.M., Church, T.R., Goldberg, C.L., Herron, R.M., Nobiletti, J.B., Rios, J.A., Reagen, W.K., Ley, C.A. 2017. Per- and polyfluoroalkyl substances (PFAS) in American Red Cross adult blood donors, 2000–2015. *Environmental Research* 157, 87–95.

[27] Health Canada. 2013. Second Report on Human Biomonitoring of Environmental Chemicals in Canada. Results of the Canadian Heath Measures Survey Cycle 2 (2009–2011). April 2013. Available at: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/environmental-contaminants/second-report-human-biomonitoring-environmental-chemicals-canada-health-canada-2013.html

[28] Shoeib, M., Harner, T., Wilford, B.H., Jones, K.C., Zhu, J. 2005. Perfluorinated sulfonamides in indoor and outdoor air and indoor dust: occurrence, partitioning, and human exposure. *Environmental Science & Technology* 39(17), 6599–6606.

[29] Vestergren, R., Cousins, I.T. 2009. Tracking the pathways of human exposure to perfluorocarboxylates. *Environmental Science & Technology* 43(15), 5565–5575.

[30] Vestergren, R., Berger, U., Glynn, A., Cousins, I.T. 2012. Dietary exposure to perfluoroalkyl acids for the Swedish population in 1999, 2005 and 2010. *Environment International* 49, 120–127.

[31] Hurley, S., Houtz, E.F., Goldberg, D., Wang, M., Park, J.S., Nelson, D.O., Reynolds, P., Bernstein, L., Anton-Culver, H., Horn-Ross, P., Petreas, M. 2016. Preliminary associations between the detection of perfluoroalkyl acids (PFAAs) in drinking water and serum concentrations in a sample of California women. *Environmental Science & Technology Letters* 3(7), 264–269.

[32] Hu, X.C., Andrews, D.Q., Lindstrom, A.B., Bruton, T.A., Schaider, L.A., Grandjean, P., Lohmann, R., Carignan C.C., Blum, A., Balan, S.A., Higgins, C.P., Sunderland, E.M. 2016. Detection of Poly-and Perfluoroalkyl Substances (PFASs) in US Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants. *Environmental Science & Technology Letters* 3(10), 344–350.

[33] Winkens, K., Vestergren, R., Berger, U., Cousins, I.T. 2017. Early life exposure to per-and polyfluoroalkyl substances (PFASs): A critical review. *Emerging Contaminants* 3, 55–68.

[34] Schaider, L.A., Balan, S.A., Blum, A., Andrews, D.Q., Strynar, M.J., Dickinson, M.E., Lunderberg, D.M., Lang, J.R., Peaslee, G.F. 2017. Fluorinated Compounds in US Fast Food Packaging. *Environmental Science & Technology Letters* 4(3), 105–111.

[35] Stadalius, M., Connolly, P., L'Empereur, K., Flaherty, J.M., Isemura, T., Kaiser, M.A., Knaup, W., Noguchi, M. 2006. A method for the low-level (ng g^{-1}) determination of perfluorooctanoate in paper and textile by liquid chromatography with tandem mass spectrometry. *Journal of Chromatography A* 1123(1), 10–14.

[36] Liu, X., Krebs, K., Guo, Z., Roache, N. 2009. Method development for liquid chromatographic/triple quadrupole mass spectrometric analysis of trace level perfluorocarboxylic acids in articles of commerce. *Journal of Chromatography A* 1216(18), 3910–3918.

[37] Herzke, D., Olsson, E., Posner, S. 2012. Perfluoroalkyl and polyfluoroalkyl substances (PFASs) in consumer products in Norway–A pilot study. *Chemosphere* 88, 980–987.

[38] Danish EPA. 2015. Polyfluoroalkyl substances (PFASs) in textiles for children. Survey of chemical substances in consumer products No. 136, 2015.

[39] Hanssen, L., Herzke, D. 2015. *Investigation of outdoor textiles and gear with respect to determine the content of ionic perfluorinated substances (PFASs). Evaluation of results* (M-315/2015) (NILU OR, 04/2015). Kjeller: NILU.

[40] Kotthoff, M., Müller, J., Jürling, H., Schlummer, M., Fiedler, D. 2015. Perfluoroalkyl and polyfluoroalkyl substances in consumer products. *Environmental Science and Pollution Research* 22, 14546–14559.

[41] Gremmel, C., Frömel, T., Knepper, T.P. 2016. Systematic determination of perfluoroalkyl and polyfluoroalkyl substances (PFASs) in outdoor jackets. *Chemosphere* 160, 173–180.

[42] van der Veen, I., Weiss, J.M., Hanning, A.C., de Boer, J., Leonards, P.E.G. 2016. Development and validation of a method for the quantification of extractable perfluoroalkyl acids (PFAAs) and perfluorooctane sulfonamide (FOSA) in textiles. *Talanta* 147, 8–15.

[43] Guo, Z., Liu, X., Krebs, K.A., Roache, N.F. 2009. Perfluorocarboxylic acid content in 116 articles of commerce. Research Triangle Park, NC: US Environmental Protection Agency.

[44] Mejia-Avendaño, S., Vo Duy, S., Sauvé, S., Liu, J. 2016. Generation of Perfluoroalkyl Acids from Aerobic Biotransformation of Quaternary Ammonium Polyfluoroalkyl Surfactants. *Environmental Science & Technology* 50(18), 9923–9932.

[45] Munoz, G., Vo Duy, S., Labadie, P., Botta, F., Budzinski, H., Lestremau, F., Liu, J., Sauvé, S. 2016. Analysis of zwitterionic, cationic, and anionic poly-and perfluoroalkyl surfactants in sediments by liquid chromatography polarity-switching electrospray ionization coupled to high resolution mass spectrometry. *Talanta* 152, 447–456.

[46] Mejia-Avendaño, S., Munoz, G., Vo Duy, S., Desrosiers, M., Benoît, P., Sauvé, S., Liu, J. 2017. Novel Fluoroalkylated Surfactants in Soils Following Firefighting Foam Deployment During the Lac-Mégantic Railway Accident. *Environmental Science & Technology* 51(15), 8313–8323.

[47] Munoz, G., Desrosiers, M., Vo Duy, S., Labadie, P., Budzinski, H., Liu, J., Sauvé, S. 2017. Environmental occurrence of perfluoroalkyl acids and novel fluorotelomer surfactants in the freshwater fish *Catostomus commersonii* and sediments following firefighting foam deployment at the Lac-Mégantic railway accident. *Environmental Science & Technology* 51(3), 1231–1240.

[48] Hedberg, J., Skoglund, S., Karlsson, M.E., Wold, S., Odnevall, W.I., Hedberg, Y. 2014. Sequential studies of silver released from silver nanoparticles in aqueous media simulating sweat, laundry detergent solutions and surface water. *Environmental Science & Technology* 48(13), 7314–7322.

[49] Saini, A., Thaysen, C., Jantunen, L., McQueen, R.H., Diamond, M.L. 2016. From clothing to laundry water: investigating the fate of phthalates, brominated flame retardants, and organophosphate esters. *Environmental Science & Technology* 50(17), 9289–9297.

[50] Steiner, I., Scharf, L., Fiala, F. and Washüttl, J. 1998. Migration of di-(2-ethylhexyl) phthalate from PVC child articles into saliva and saliva simulant. *Food Additives & Contaminants* 15(7), 812–817.

[51] Niino, T., Ishibashi, T., Itho, T., Sakai, S., Ishiwata, H., Yamada, T. and Onodera, S. 2001. Monoester formation by hydrolysis of dialkyl phthalate migrating from polyvinyl chloride products in human saliva. *Journal of Health Science* 47(3), 318–322.

[52] Szostek, B., Prickett, K.B., Buck, R.C. 2006. Determination of fluorotelomer alcohols by liquid chromatography/tandem mass spectrometry in water. *Rapid Communications in Mass Spectrometry* 20(19), 2837–2844.

[53] Reed, R.B., Zaikova, T., Barber, A., Simonich, M., Lankone, R., Marco, M., Hristovski, K., Herckes, P., Passantino, L., Fairbrother, D.H., Tanguay, R., Ranville, J.F., Hutchison, J.E., Westerhoff, P.K. 2016. Potential environmental impacts and antimicrobial efficacy of silver-and nanosilver-containing textiles. *Environmental Science & Technology* 50(7), 4018–4026.

[54] Munoz, G., Giraudel, J.L., Botta, F., Lestremau, F., Dévier, M.H., Budzinski, H., Labadie, P. 2015. Spatial distribution and partitioning behavior of selected poly-and perfluoroalkyl substances in freshwater ecosystems: a French nationwide survey. *Science of the Total Environment* 517, 48–56.

[55] Von Goetz, N., Lorenz, C., Windler, L., Nowack, B., Heuberger, M., Hungerbuhler, K. 2013. Migration of Ag-and TiO_2-(Nano) particles from textiles into artificial sweat under physical stress: experiments and exposure modeling. *Environmental Science & Technology* 47(17), 9979–9987.

[56] Mejia-Avendaño, S., Munoz, G., Sauvé, S., Liu, J. 2017. Assessment of the Influence of Soil Characteristics and Hydrocarbon Fuel Cocontamination on the Solvent Extraction of Perfluoroalkyl and Polyfluoroalkyl Substances. *Analytical Chemistry* 89(4), 2539–2546.

[57] Draft Textile Restricted Substance List, Annex to the EU Ecolabel for textile products, <http://susproc.jrc.ec.europa.eu/textiles/docs/130206%20Ecolabel%20textiles_Restricted%20Substance%20List_Draft%20v2.pdf>

[58] United Nations Environmental Program, 2011. UNEP/POPS/POPRC.6/13/Add.3/Rev.1. Draft Guidance on alternatives to perfluorooctane sulfonic acid and its derivatives, October 14th, 2011.

[59] Alaee, M., Arias, P., Sjödin, A., Bergman, Å. 2003. An overview of commercially used brominated flame retardants, their applications, their use patterns in different countries/regions and possible modes of release. *Environment International* 29(6), 683–689.

[60] Teflon™ textile finishes, Chemours. Available at: http://pages.chemours.com/EcoElite.html

[61] Schenkels, L.C., Veerman, E.C., Nieuw Amerongen, A.V. 1995. Biochemical composition of human saliva in relation to other mucosal fluids. *Critical Reviews in Oral Biology & Medicine* 6(2), 161–175.

[62] Robel, A. E., Marshall, K., Dickinson, M., Lunderberg, D., Butt, C., Peaslee, G., Stapleton, H.M., Field, J.A. 2017. Closing the Mass Balance on Fluorine on Papers and Textiles. *Environmental Science & Technology* 51(16), 9022–9032.

[63] Ritter, E.E., Dickinson, M.E., Harron, J.P., Lunderberg, D.M., DeYoung, P.A., Robel, A.E., Field, J.A. Peaslee, G.F. 2017. PIGE as a screening tool for Per- and polyfluorinated substances in papers and textiles. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms* 407, 47–54.

ANNEX

Furthering the Understanding of the Migration of Chemicals from Consumer Products – Phase 2

A Study of Per- and Polyfluoroalkyl Substances (PFASs) in Clothing, Apparel, and Children's Items

Contents

Annex 1. Details on UHPLC-MS operating parameters

The Dionex Ultimate 3000 LC chain was controlled via the Chromeleon 7.2 Software (Thermo Fisher Scientific, Waltham, MA, USA, and Dionex Softron GMbH part of Thermo Fisher Scientific, Germany). A Thermo Hypersil Gold aQ (polar endcapped C18) column (100 mm x 2.1 mm; 1.9 µm particle size) was used for analyte separation. The possibility of background PFASs coming from LC tubings was prevented by using a trap column (Thermo Hypercarb, 20 mm x 2.1 mm; 7 µm particle size) positioned immediately after the aqueous and organic LC mobile phases mixing point but before the injector. The aqueous mobile phase (A) consisted of HPLC-water with 0.1% HCOOH (v/v) and the organic mobile phase (B) of ACN with 0.1% HCOOH (v/v). Flow rate was set at 0.55 mL min^{-1}, injection volume at 8 µL, and column inlet temperature at 40°C. Chromatographic gradient elution conditions were as follows: gradual increase of B channel from 10 to 72.5% (0–7 min), and then from 72.5 to 100% (7–8.5 min). The 0:100 A:B ratio was held for 4 minutes (8.5–12.5 min), then returned to the 90:10 initial set up (12.5–12.6 min) which was kept constant for 2 minutes to allow the system to equilibrate (12.6–14.5 min). Prior to each injection, the injection needle was rinsed sequentially with i) an equivolumetric mixture of acetonitrile / methanol / isopropanol and ii) HPLC-water containing 0.1% HCOOH.

The heated electrospray ionization source was used with the following settings: sheath gas flow rate was 40 arbitrary units (a.u.), auxiliary gas flow rate 15 a.u., sweep gas flow rate 0 a.u., capillary temperature 320°C and vaporizer temperature 350°C. Spray voltage was -4 kV (negative ionization mode). Analyte detection was performed using a Q-Exactive Orbitrap mass spectrometer controlled by the Xcalibur 2.3 software (Thermo Fisher Scientific, Waltham, MA, USA). Orbitrap parameters were set as follows: AGC target (maximum capacity in C-trap) was set at 3 x 10^6, maximum injection time at 50 ms, and resolution at 70,000 FWHM at 200 m/z. The mass scan range was set at 150–1000 m/z (Full Scan MS mode).

Figure S 1. In-store versus online purchases, breakdown per country

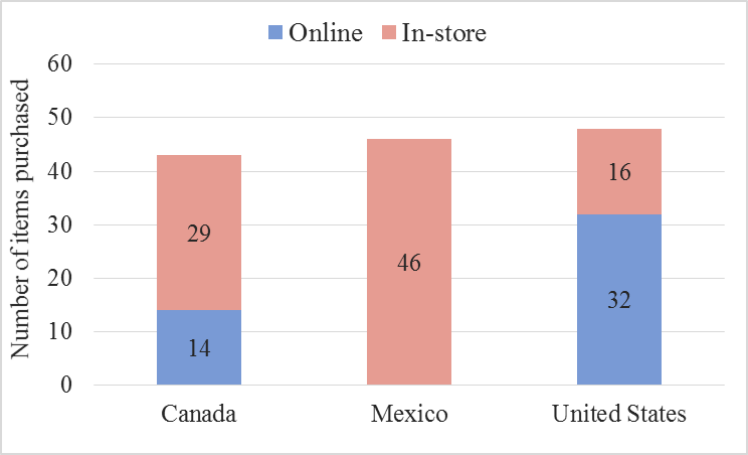


Figure S 2. Chemical structures of the 31 targeted PFASs

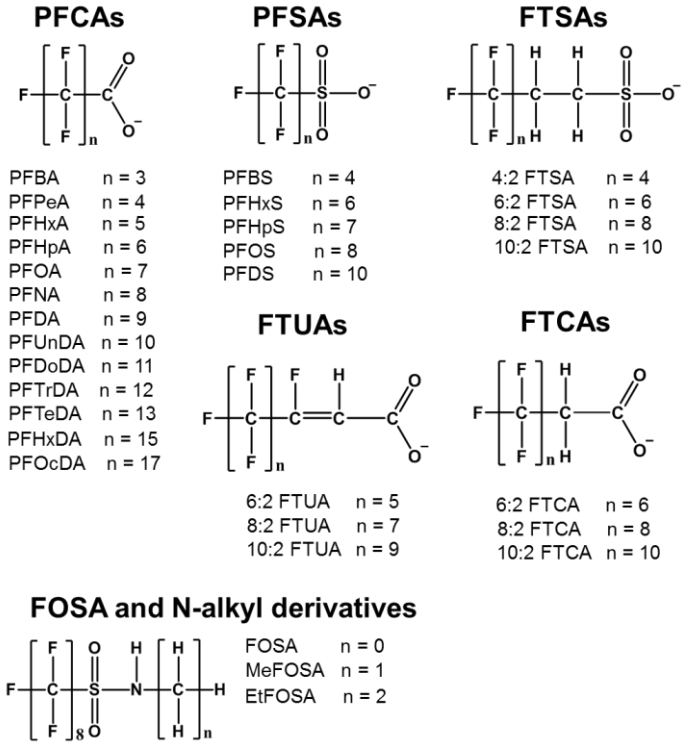
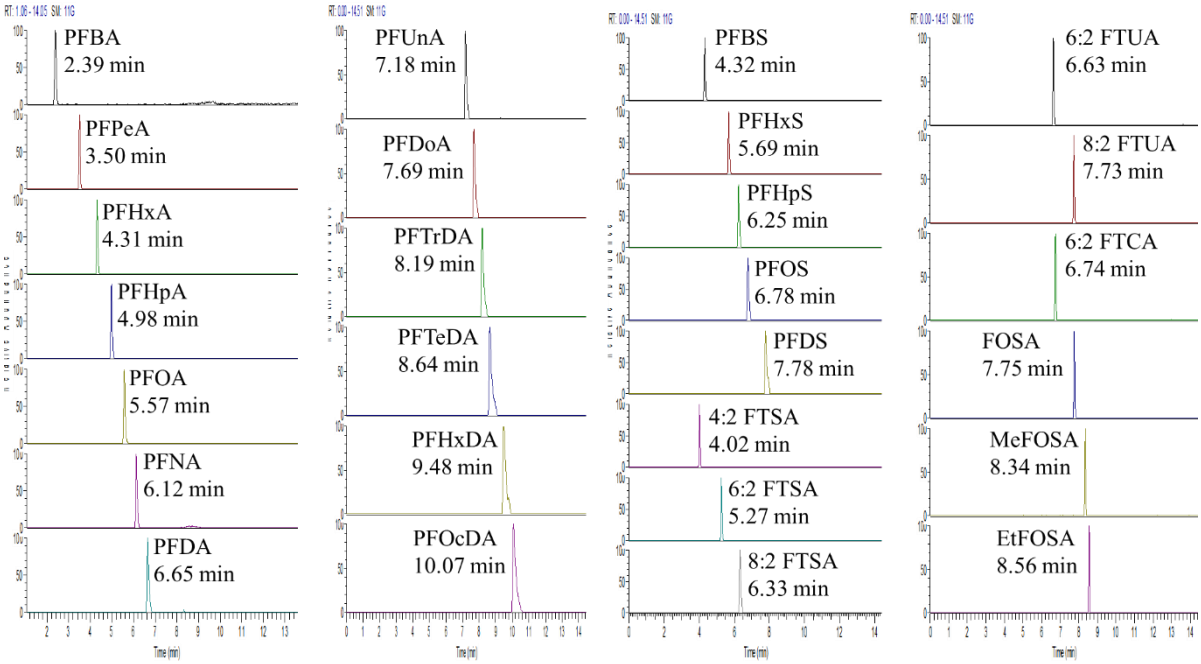
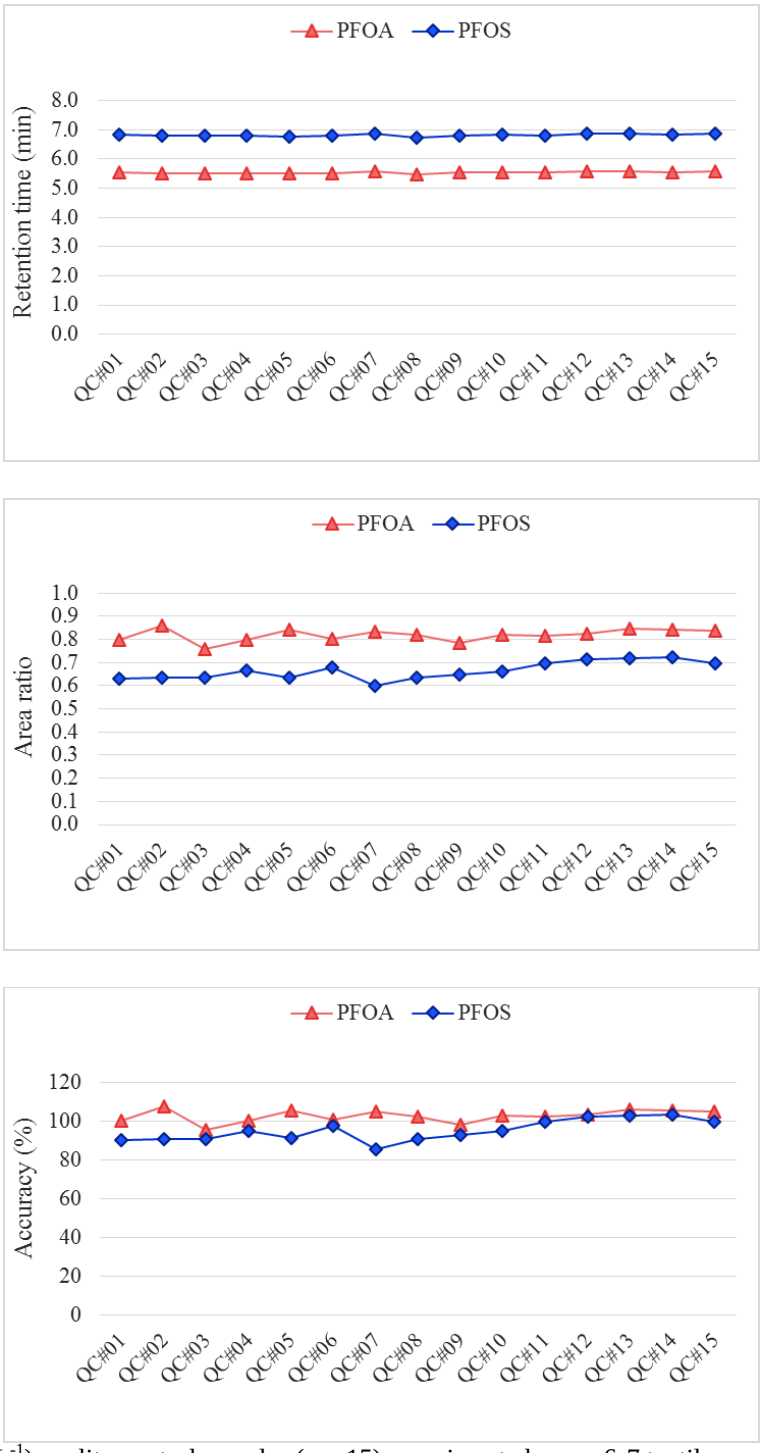


Figure S 3. UHPLC-Orbitrap-MS chromatograms for the 26 quantitative PFASs* illustrated at a level of 1 ng/mL



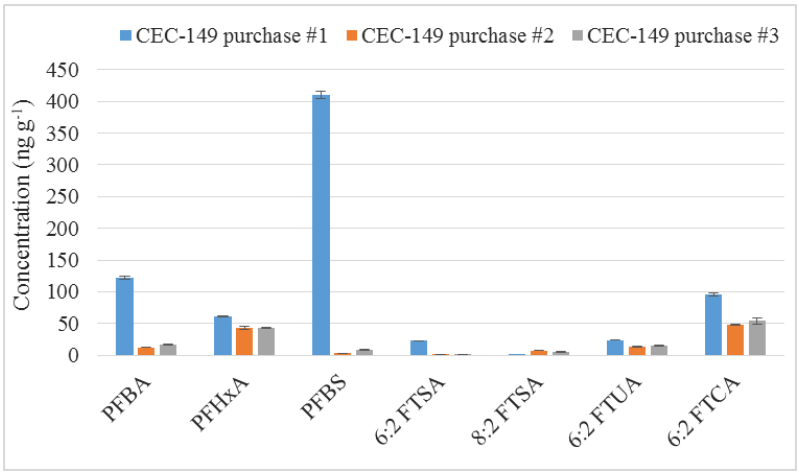
***** (compounds for which certified standards were used)

Figure S 4. Illustration of the quality control chart approach implemented in the present survey*



*Low-level (1 ng mL^{-1}) quality control samples (n = 15) were inserted every 6-7 textile sample extracts (here, along a sequence comprising ~100 textile extracts as per WP1) to monitor analyte retention time, response ratios, and accuracy, as shown here for PFOA and PFOS.

Figure S 5. Preliminary investigation of the between-sample differences*



***** Illustrated for three replicate purchases from a single location of CEC-149, which is a premium quality outdoor jacket with Gore-TexTM technology. Error bars represent standard deviations for a triplicate sample preparation: for each item, three composite samples of 30 cm2 each were prepared from a large composite sample of about 90 cm2 (incorporating itself different parts from the item such as the hood, body, and sleeves).

Table S 1. Purchase location (city and state) of the 137 items investigated in the present survey

Canada	Mexico	United States
Burlington, ON Burnbay, BC Montreal, QC Ottawa, ON Vancouver, BC	Guadalajara, JAL Mexico City Morelia, MICH Pachuca, HGO Queretaro, QRO Tepic, NAY	Bethlehem, PA Brooklin, NY Columbus, OH Dayton, OH Franklin Park, IL Indianapolis, IN Jamaica, NY Lenaxa, KS Lexington, KY Mason, OH Miami, FL New York, NY Olathe, KS Plainfield, IL Plattsburgh, NY Shepherdsville, KY

Table S 2. List of isotopically-labeled standards

Acronym	Name	Exact mass	Use
$^{13}C_4$-PFBA	Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid	216.99177	Surrogate std.
$^{13}C_5$-PFPeA	Perfluoro-n-[$^{13}C_5$]pentanoic acid	267.99345	Surrogate std.
$^{13}C_5$-PFHxA	Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	317.99046	Surrogate std.
$^{13}C_4$-PFHpA	Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	366.98249	Surrogate std.
$^{13}C_8$-PFOA	Perfluoro-n-[$^{13}C_8$]octanoic acid	420.99272	Surrogate std.
$^{13}C_9$-PFNA	Perfluoro-n-[$^{13}C_9$]nonanoic acid	471.99288	Surrogate std.
$^{13}C_6$-PFDA	Perfluoro-n-[1,2,3,4,5,6-$^{13}C_6$]decanoic acid	518.97962	Surrogate std.
$^{13}C_7$-PFUnA	Perfluoro-n-[1,2,3,4,5,6,7-$^{13}C_7$]undecanoic acid	569.97978	Surrogate std.
$^{13}C_2$-PFDoA	Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid	614.95981	Surrogate std.
$^{13}C_2$-PFTeDA	Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid	714.95342	Surrogate std.
$^{13}C_2$-PFHxDA	Perfluoro-n-[1,2-$^{13}C_2$]hexadecanoic acid	814.94703	Surrogate std.
$^{13}C_3$-PFBS	Perfluoro-1-[2,3,4-$^{13}C_3$]butanesulfonate	301.95251	Surrogate std.
$^{13}C_3$-PFHxS	Perfluoro-1-[1,2,3-$^{13}C_3$]hexanesulfonate	401.94612	Surrogate std.
$^{13}C_8$-PFOS	Perfluoro-1-[$^{13}C_8$]octanesulfonate	506.95641	Surrogate std.
$^{13}C_2$-6:2 FTSA	1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]-octane sulfonate	428.97537	Internal std.
$^{13}C_2$-8:2 FTSA	1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]-decane sulfonate	528.96898	Surrogate std.
$^{13}C_2$-6:2 FTUA	2H-Perfluoro-[1,2-$^{13}C_2$]-2-octenoic acid	358.98520	Surrogate std.
$^{13}C_2$-8:2 FTUA	2H-Perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid	458.97881	Surrogate std.
$^{13}C_8$-FOSA	Perfluoro-1-[$^{13}C_8$]octanesulfonamide	505.97249	Surrogate std.
d_5-N-EtFOSA	N-ethyl-d_5-perfluoro-1-octanesulfonamide	531.00830	Surrogate std.

Table S 3. Correspondence between native analytes and isotopically labeled surrogate standards

Analyte	Certified standard used for quantification or semi-quantification	Data quality	Analyte / Surrogate Standard association
PFBA	PFBA	Qn	$^{13}C_4$-PFBA
PFPeA	PFPeA	Qn	$^{13}C_5$-PFPeA
PFHxA	PFHxA	Qn	$^{13}C_5$-PFHxA
PFHpA	PFHpA	Qn	$^{13}C_4$-PFHpA
PFOA	PFOA	Qn	$^{13}C_8$-PFOA
PFNA	PFNA	Qn	$^{13}C_9$-PFNA
PFDA	PFDA	Qn	$^{13}C_6$-PFDA
PFUnA	PFUnA	Qn	$^{13}C_7$-PFUnA
PFDoA	PFDoA	Qn	$^{13}C_2$-PFDoA
PFTrDA	PFTrDA	Qn	$^{13}C_2$-PFTeDA
PFTeDA	PFTeDA	Qn	$^{13}C_2$-PFTeDA
PFHxDA	PFHxDA	Qn	$^{13}C_2$-PFHxDA
PFOcDA	PFOcDA	Qn	$^{13}C_2$-PFHxDA
PFBS	PFBS	Qn	$^{13}C_3$-PFBS
PFHxS	PFHxS	Qn	$^{13}C_3$-PFHxS
PFHpS	PFHpS	Qn	$^{13}C_3$-PFHxS
PFOS	PFOS	Qn	$^{13}C_8$-PFOS
PFDS	PFDS	Qn	$^{13}C_8$-PFOS
6:2 FTCA	6:2 FTCA	Qn	$^{13}C_8$-PFOA
8:2 FTCA	6:2 FTCA	Sq	$^{13}C_8$-PFOA
10:2 FTCA	6:2 FTCA	Sq	$^{13}C_8$-PFOA
4:2 FTSA	4:2 FTSA	Qn	$^{13}C_2$-8:2 FTSA
6:2 FTSA	6:2 FTSA	Qn	$^{13}C_2$-8:2 FTSA
8:2 FTSA	8:2 FTSA	Qn	$^{13}C_2$-8:2 FTSA
10:2 FTSA	8:2 FTSA	Sq	$^{13}C_2$-8:2 FTSA
6:2 FTUA	6:2 FTUA	Qn	$^{13}C_2$-6:2 FTUA
8:2 FTUA	8:2 FTUA	Qn	$^{13}C_2$-8:2 FTUA
10:2 FTUA	8:2 FTUA	Sq	$^{13}C_2$-8:2 FTUA
FOSA	FOSA	Qn	$^{13}C_8$-FOSA
MeFOSA	EtFOSA	Sq	d_5-N-EtFOSA
EtFOSA	EtFOSA	Qn	d_5-N-EtFOSA

Table S 4. Chemical formulas and exact mass of the targeted PFASs

Analyte	Chemical formula	Exact mass
PFBA	$C_4F_7O_2^-$	212.97947
PFPeA	$C_5F_9O_2^-$	262.97669
PFHxA	$C_6F_{11}O_2^-$	312.97335
PFHpA	$C_7F_{13}O_2^-$	362.97013
PFOA	$C_8F_{15}O_2^-$	412.96714
PFNA	$C_9F_{17}O_2^-$	462.96414
PFDA	$C_{10}F_{19}O_2^-$	512.96066
PFUnA	$C_{11}F_{21}O_2^-$	562.9574
PFDoA	$C_{12}F_{23}O_2^-$	612.95461
PFTrDA	$C_{13}F_{25}O_2^-$	662.95041
PFTeDA	$C_{14}F_{27}O_2^-$	712.94808
PFHxDA	$C_{16}F_{31}O_2^-$	812.94292
PFOcDA	$C_{18}F_{35}O_2^-$	912.93394
PFBS	$C_4F_9SO_3^-$	298.94326
PFHxS	$C_6F_{13}SO_3^-$	398.93712
PFHpS	$C_7F_{15}SO_3^-$	448.93286
PFOS	$C_8F_{17}SO_3^-$	498.93126
PFDS	$C_{10}F_{21}SO_3^-$	598.92487
6:2 FTCA	$C_8F_{13}H_2O_2^-$	376.98471
8:2 FTCA	$C_{10}F_{17}H_2O_2^-$	476.97832
10:2 FTCA	$C_{12}F_{21}H_2O_2^-$	576.97193
4:2 FTSA	$C_6F_9H_4SO_2^-$	326.97374
6:2 FTSA	$C_8F_{13}H_4SO_2^-$	426.96866
8:2 FTSA	$C_{10}F_{17}H_4SO_2^-$	526.96097
10:2 FTSA	$C_{12}F_{21}H_4SO_2^-$	626.95458
6:2 FTUA	$C_8F_{12}H_2O_2^-$	356.97849
8:2 FTUA	$C_{10}F_{16}H_2O_2^-$	456.97210
10:2 FTUA	$C_{12}F_{20}H_2O_2^-$	556.96571
FOSA	$C_8F_{17}SO_2NH^-$	497.94631
MeFOSA	$C_9F_{17}SO_2NH_3^-$	512.96912
EtFOSA	$C_{10}F_{17}SO_2NH_5^-$	526.98477

Table S 5. Detailed PFAS levels (ng) in each procedural blank executed within WP1

	WP1 procedural blank number (in order of realization)												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
PFBA	ND	ND	ND	ND	ND	ND	0.092	ND	0.104	0.062	ND	ND	ND
PFPeA	0.027	0.022	0.021	0.022	ND	0.020	ND	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOA	0.035	0.024	0.027	0.027	0.029	0.023	ND	ND	ND	ND	ND	ND	ND
PFNA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOcDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MeFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EtFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table S5. (Continued)

	WP1 procedural blank number (in order of realization)											
	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25
PFBA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFPeA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFNA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOcDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MeFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

EtFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table S5. (Continued)

	WP1 procedural blank number (in order of realization)											
	#26	#27	#28	#29	#30	#31	#32	#33	#34	#35	#36	#37
PFBA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFPeA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFNA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOcDA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MeFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EtFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table S 6. Detailed PFAS levels (ng) in migration test procedural blanks

	La#1	La#2	La#3	Sa#1	Sa#2	Sa#3	Sw#1	Sw#2	Sw#3
PFBA	ND	ND	ND	ND	ND	ND	0.099	0.104	0.044
PFPeA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOA	0.132	0.122	0.105	ND	ND	ND	ND	ND	ND
PFNA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOcDA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHpS	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOS	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTCA	ND	ND	ND	ND	ND	ND	ND	ND	ND
4:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTS	ND	ND	ND	0.029	0.026	0.022	0.013	0.023	0.020
8:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTS	ND	ND	ND	ND	ND	ND	ND	ND	ND
6:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTUA	ND	ND	ND	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND
MeFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND
EtFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND

La: laundry test; Sa: artificial saliva; Sw: artificial sweat.

Table S 7. Linearity performance of the 26 quantitative PFASs

Analyte	R^2	Linearity range ng mL^{-1}
PFBA	0.9997	0.1–40
PFPeA	0.9996	0.05–40
PFHxA	0.9995	0.025–40
PFHpA	0.9997	0.05–40
PFOA	0.9996	0.025–40
PFNA	0.9992	0.025–40
PFDA	0.9998	0.025–40
PFUnA	0.9997	0.025–40
PFDoA	0.9979	0.05–40
PFTrDA	0.9982	0.05–40
PFTeDA	0.9978	0.025–40
PFHxDA	0.9966	0.025–40
PFOcDA	0.9960	0.05–40
PFBS	0.9995	0.025–40
PFHxS	0.9998	0.025–40
PFHpS	0.9999	0.025–40
PFOS	0.9997	0.05–40
PFDS	0.9996	0.05–40
6:2 FTCA	0.9996	0.2–40
4:2 FTSA	0.9999	0.025–40
6:2 FTSA	0.9999	0.025–40
8:2 FTSA	0.9996	0.025–40
6:2 FTUA	0.9978	0.05–40
8:2 FTUA	0.9990	0.05–40
FOSA	0.9991	0.025–40
EtFOSA	0.9998	0.1–40

The inverse-weighted linear regressions were constructed by plotting the relative response ratio (area ratio of native analyte to surrogate standard) (A_x/A_{SS}) as a function of relative amounts added (mass ratio of native analyte to surrogate standard) (m_x/m_{SS}). Seven- to ten-point based calibration curves were constructed, the linearity range tested covering at most >3 orders of magnitude (0.025 – 40 ng mL^{-1}). Note that the actual linearity range of the method may extend beyond the last calibration curve level tested of 40 ng mL^{-1}.

Table S 8. Accuracy and precision performance at the low and high spike levels

	Low spike level (1 ng mL^{-1})		High spike level (25 ng mL^{-1})	
Analyte	Accuracy (%) n = 5 Average ± SD	Precision n = 5 RSD (%)	Accuracy (%) n = 5 Average ± SD	Precision n = 5 RSD (%)
PFBA	105 ± 1	1.4	99 ± 1	1.1
PFPeA	101 ± 2	2.0	98 ± 2	1.6
PFHxA	100 ± 2	2.0	99 ± 1	1.2
PFHpA	100 ± 3	2.8	98 ± 1	1.4
PFOA	110 ± 3	3.0	98 ± 2	1.7
PFNA	102 ± 1	0.7	98 ± 1	1.2
PFDA	101 ± 2	2.3	98 ± 2	2.1
PFUnA	101 ± 1	1.4	98 ± 1	1.0
PFDoA	103 ± 1	1.2	99 ± 1	1.1
PFTrDA	107 ± 4	3.5	98 ± 0	0.3
PFTeDA	108 ± 2	1.8	97 ± 1	1.5
PFHxDA	115 ± 2	1.9	99 ± 1	1.2
PFOcDA	110 ± 5	4.2	98 ± 3	2.9
PFBS	97 ± 1	1.1	98 ± 2	1.6
PFHxS	101 ± 2	1.8	97 ± 1	1.1
PFHpS	98 ± 2	2.2	97 ± 2	1.7
PFOS	99 ± 1	1.2	97 ± 1	1.0
PFDS	105 ± 10	9.4	96 ± 1	1.0
6:2 FTCA	92 ± 3	3.8	98 ± 2	1.9
4:2 FTSA	99 ± 2	1.6	97 ± 2	1.8
6:2 FTSA	104 ± 2	1.7	97 ± 1	1.4
8:2 FTSA	95 ± 2	2.0	97 ± 2	1.6
6:2 FTUA	102 ± 1	0.8	97 ± 1	1.8
8:2 FTUA	104 ± 3	2.9	97 ± 2	1.4
FOSA	105 ± 2	1.6	98 ± 1	1.6
EtFOSA	95 ± 2	5.7	98 ± 1	1.3

Table S 9. Accuracy performance of QC samples inserted along the analytical sequence

Analyte	Accuracy (%) n = 15 Average ± SD
PFBA	106 ± 6
PFPeA	105 ± 4
PFHxA	100 ± 4
PFHpA	112 ± 7
PFOA	103 ± 3
PFNA	100 ± 6
PFDA	114 ± 4
PFUnA	95 ± 3
PFDoA	96 ± 4
PFTrDA	99 ± 5
PFTeDA	98 ± 6
PFHxDA	98 ± 7
PFOcDA	98 ± 6
PFBS	94 ± 6
PFHxS	111 ± 3
PFHpS	99 ± 3
PFOS	95 ± 5
PFDS	95 ± 3
6:2 FTCA	89 ± 6
4:2 FTSA	96 ± 5
6:2 FTSA	99 ± 5
8:2 FTSA	100 ± 4
6:2 FTUA	102 ± 7
8:2 FTUA	105 ± 4
FOSA	100 ± 5
EtFOSA	96 ± 5

Accuracy (average ± SD) of the 26 quantitative PFAS obtained for the 15 low-level (1 ng mL-1) quality control samples inserted every 6-7 textile sample extracts (here, along a sequence comprising ~100 textile extracts during WP1 assessment).

Table S 10. Compound-specific instrumental limits of detection (iLOD) and instrumental limits of quantification (iLOQ)

Analyte	iLOD ng mL^{-1}	iLOQ ng mL^{-1}
PFBA	0.03	0.1
PFPeA	0.01	0.05
PFHxA	0.007	0.025
PFHpA	0.01	0.05
PFOA	0.01	0.025
PFNA	0.005	0.025
PFDA	0.005	0.025
PFUnA	0.005	0.025
PFDoA	0.01	0.05
PFTrDA	0.01	0.05
PFTeDA	0.005	0.025
PFHxDA	0.005	0.025
PFOcDA	0.02	0.05
PFBS	0.01	0.025
PFHxS	0.005	0.025
PFHpS	0.006	0.025
PFOS	0.01	0.05
PFDS	0.02	0.05
6:2 FTCA	0.1	0.2
8:2 FTCA*	0.1	0.2
10:2 FTCA*	0.1	0.2
4:2 FTSA	0.009	0.025
6:2 FTSA	0.01	0.025
8:2 FTSA	0.005	0.025
10:2 FTSA*	0.005	0.025
6:2 FTUA	0.01	0.05
8:2 FTUA	0.006	0.05
10:2 FTUA*	0.006	0.05
FOSA	0.008	0.025
MeFOSA*	0.02	0.1
EtFOSA	0.02	0.1

*Estimated values.

Table S 11. PFAS profiles observed upon migration to artificial saliva (Concentrations are in ng/g)

	Baby bib CEC_008	Baby bib CEC_009	Children's rainsuit CEC_035	Waterproof changing table mat CEC_044
PFBA	0.52	0.028	0.05	<LOD
PFPeA	0.56	<LOD	0.05	<LOD
PFHxA	2.6	0.07	0.20	<LOD
PFHpA	0.60	0.02	0.12	<LOD
PFOA	2.5	0.21	1.9	<LOD
PFNA	0.09	0.03	0.04	<LOD
PFDA	0.15	0.07	0.36	<LOD
PFDoA	<LOD	<LOD	0.02	<LOD
PFTeDA	<LOD	<LOD	0.03	<LOD
PFHxDA	<LOD	<LOD	0.016	<LOD
PFBS	<LOD	<LOD	<LOD	3.1
6:2 FTS	<LOD	0.04	0.27	<LOD
8:2 FTS	<LOD	0.011	4.1	<LOD
10:2 FTS	<LOD	<LOD	0.34	<LOD
8:2 FTUA	<LOD	0.013	0.29	<LOD
10:2 FTUA	<LOD	<LOD	0.027	<LOD

Analytes that remained systematically <LOD across the 4 considered items are not shown in this table.

Table S 12. PFAS profiles observed upon migration to artificial sweat (Concentrations are in ng/g)

	Adult outdoor jacket CEC_006	Cycling gloves CEC_018	Children's outdoor jacket CEC_036	Adult outdoor jacket, Gore-Tex CEC_050	Children's outdoor jacket CEC_069	Waterproof trousers CEC_078
PFBA	0.014	<LOD	4.8	18	<LOD	0.04
PFPeA	0.09	<LOD	0.24	0.59	0.02	0.02
PFHxA	0.65	0.03	2.1	2.0	0.11	0.96
PFHpA	0.15	<LOD	0.09	0.08	0.06	0.13
PFOA	<LOD	<LOD	0.05	<LOD	0.42	0.17
PFNA	1.4	<LOD	0.02	<LOD	0.01	0.01
PFDA	0.25	<LOD	<LOD	0.18	0.05	<LOD
PFUnDA	0.04	<LOD	<LOD	<LOD	<LOD	<LOD
PFBS	0.19	<LOQ	0.01	18	0.02	0.01
PFHxS	<LOD	<LOD	<LOD	<LOD	0.03	<LOD
PFOS	0.01	<LOD	<LOD	<LOD	<LOD	<LOD
6:2 FTCA	<LOD	<LOD	0.73	12	<LOD	<LOD
4:2 FTS	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
6:2 FTS	<LOD	<LOQ	0.01	0.52	0.01	<LOD
8:2 FTS	<LOD	<LOD	0.01	<LOD	<LOD	<LOD
6:2 FTUA	<LOD	<LOD	0.57	2.5	<LOD	<LOD
8:2 FTUA	0.08	<LOD	<LOD	<LOD	<LOD	<LOD
10:2 FTUA	0.02	<LOD	<LOD	<LOD	<LOD	<LOD

Analytes that remained systematically <LOD across the 11 considered items are not shown in this table.

	Waterproof trousers CEC_080	Children's gloves CEC_096	Waterproof trousers CEC_125	Winter gloves CEC_138	Adult outdoor jacket, Gore-Tex CEC_149
PFBA	1.4	0.16	0.53	<LOD	43
PFPeA	1.7	0.14	0.12	0.01	0.84
PFHxA	9.6	0.47	0.40	0.24	6.7
PFHpA	1.6	0.17	0.42	0.57	0.34
PFOA	2.0	0.52	2.1	47	0.37
PFNA	0.17	0.05	3.6	0.02	0.19
PFDA	0.29	0.05	0.04	<LOD	0.27
PFUnDA	<LOD	<LOD	0.05	<LOD	<LOD

PFBS	0.14	0.03	0.11	<LOD	37
PFHxS	<LOD	<LOD	<LOD	<LOD	<LOD
PFOS	<LOD	<LOD	<LOD	<LOD	<LOD
6:2 FTCA	0.12	<LOD	0.01	<LOD	5.9
4:2 FTS	<LOD	<LOD	<LOD	<LOD	0.02
6:2 FTS	0.05	<LOD	0.03	<LOD	5.6
8:2 FTS	0.26	<LOD	0.12	<LOD	<LOD
6:2 FTUA	0.05	0.01	<LOD	<LOD	<LOD
8:2 FTUA	0.04	0.06	0.16	0.04	<LOD
10:2 FTUA	0.01	<LOD	<LOD	<LOD	<LOD

Analytes that remained systematically <LOD across the 11 considered items are not shown in this table.

Annex 2. WP1 Database

Data D1-D137. PFAS analysis reports for the 137 samples surveyed

Data D1-D20. Adult outdoor jackets
Data D21-D40. Adult ponchos/rainsuits
Data D41-D44. Baby mats, pads, or blankets
Data D45-D73. Baby/children's bibs
Data D74-D84. Children's outdoor jackets
Data D85-D100. Children's ponchos/rainsuits
Data D101-D102. Cycling jackets
Data D103-D106. Fire retardant/flame resistant
Data D107-D109. Bed linens
Data D110-D113. Miscellaneous items
Data D114-D119. Snowsuits or snow hats
Data D120-D122. Sport gloves
Data D123-D132. Waterproof trousers
Data D133-D137. Winter gloves

Data D1. Adult outdoor jacket

Internal laboratory code	CEC_046
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	Vietnam
Price without tax	119.99
Currency	C$

Fabric composition	100% Nylon
	DWR finish

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	4.8
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	1.9
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**6.7**

Data D2. Adult outdoor jacket

Internal laboratory code	CEC_090
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	China
Price without tax	149.97
Currency	US

Fabric composition	100% Nylon
	Fluorine free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.07
PFHpA	<LOD
PFOA	0.23
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.30**

Data D3. Adult outdoor jacket

Internal laboratory code	CEC_149
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	China
Price without tax	290
Currency	C$

Fabric composition	100% Polyester; Exception Trims
	GORE-TEX membrane; 100% Seam Taped

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	123
PFPeA	4.2
PFHxA	53
PFHpA	8.7
PFOA	0.27
PFNA	<LOD
PFDA	1.1
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	420
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.19
PFDS	<LOD
6:2 FTCA	116
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	31
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	18
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	0.20
Σ_{31}PFAS	**776**

Data D4. Adult outdoor jacket

Internal laboratory code	CEC_050
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	China
Price without tax	269.99
Currency	C$

Fabric composition	100% Polyester
	GORE-TEX membrane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	32
PFPeA	1.6
PFHxA	11
PFHpA	0.99
PFOA	<LOD
PFNA	<LOD
PFDA	0.41
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	92
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	35
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	2.3
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	7.7
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**184**

Data D5. Adult outdoor jacket

Internal laboratory code	CEC_071
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	Bangladesh
Price without tax	37.51
Currency	US

Fabric composition	Face 92% Polyester, 8% Spandex; Back 100% Polyester
	Teflon D/W/R, Wind-and-water-resistant finish

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.10
PFHxA	0.43
PFHpA	<LOD
PFOA	0.07
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.61**

Data D6. Adult outdoor jacket

Internal laboratory code	CEC_127
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	89.95
Currency	C$

Fabric composition	100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	2.1
PFPeA	1.6
PFHxA	8.8
PFHpA	9.2
PFOA	45
PFNA	5.6
PFDA	29
PFUnA	1.9
PFDoA	7.6
PFTrDA	0.55
PFTeDA	0.69
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.75
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.85
8:2 FTS	20
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	0.13
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**134**

Data D7. Adult outdoor jacket

Internal laboratory code	CEC_006
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	Bangladesh
Price without tax	49.97
Currency	C$

Fabric composition	Shell 100% Polyester; Side panel 92/8 Polyester/Spandex; Lining 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.12
PFHxA	0.62
PFHpA	0.21
PFOA	2.5
PFNA	3.2
PFDA	1.7
PFUnA	1.2
PFDoA	0.28
PFTrDA	<LOD
PFTeDA	0.17
PFHxDA	0.07
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.10
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	0.67
10:2 FTCA	2.2
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	0.20
6:2 FTUA	<LOD
8:2 FTUA	0.07
10:2 FTUA	0.44
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**14**

Data D8. Adult outdoor jacket

Internal laboratory code	CEC_112
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	10.98
Currency	US

Fabric composition	Shell 100% Nylon with Acrylic coating

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	1.2
PFHpA	1.0
PFOA	5.3
PFNA	0.57
PFDA	1.7
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	0.28
PFHxDA	0.15
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	1.4
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**12**

Data D9. Adult outdoor jacket

Internal laboratory code	CEC_075
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	74.99
Currency	US

Fabric composition	100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.31
PFHpA	<LOD
PFOA	0.81
PFNA	6.6
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**7.7**

Data D10. Adult outdoor jacket

Internal laboratory code	CEC_089
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	China
Price without tax	90
Currency	US

Fabric composition	Shell 100% Nylon / Body Lining 100% Polyester / Hood, Sleeve Lining 100% Nylon / Pocket 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.90
PFHpA	0.61
PFOA	1.6
PFNA	0.28
PFDA	0.29
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.13
PFHxS	2.7
PFHpS	0.07
PFOS	0.96
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	0.05
10:2 FTS	<LOD
6:2 FTUA	0.09
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**7.6**

Data D11. Adult outdoor jacket

Internal laboratory code	CEC_103
Item category	Adult Outdoor Jacket
Country of purchase	Mexico
Country of manufacture	Vietnam
Price without tax	545.58
Currency	MXN

Fabric composition	Body 100% Polyester; Pocket bags 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.24
PFPeA	<LOD
PFHxA	1.7
PFHpA	0.99
PFOA	0.82
PFNA	2.8
PFDA	0.22
PFUnA	0.47
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**7.3**

Data D12. Adult outdoor jacket

Internal laboratory code	CEC_049
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	Vietnam
Price without tax	149.99
Currency	C$

Fabric composition	100% Nylon

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	3.7
PFHpA	0.76
PFOA	0.88
PFNA	<LOD
PFDA	0.39
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.68
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**6.4**

Data D13. Adult outdoor jacket

Internal laboratory code	CEC_093
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	China
Price without tax	150
Currency	C$

Fabric composition	00% Nylon; Other: 80% Nylon 20% Spandex; Lining: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.21
PFHxA	0.61
PFHpA	0.62
PFOA	2.1
PFNA	0.56
PFDA	1.15
PFUnA	0.26
PFDoA	0.33
PFTrDA	0.08
PFTeDA	0.07
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.23
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	0.06
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**6.3**

Data D14. Adult outdoor jacket

Internal laboratory code	CEC_094
Item category	Adult Outdoor Jacket
Country of purchase	Canada
Country of manufacture	Cambodia
Price without tax	150
Currency	C$

Fabric composition	Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.33
PFPeA	0.21
PFHxA	0.79
PFHpA	0.34
PFOA	2.4
PFNA	0.14
PFDA	1.1
PFUnA	<LOD
PFDoA	0.54
PFTrDA	<LOD
PFTeDA	0.19
PFHxDA	0.06
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**6.1**

Data D15. Adult outdoor jacket

Internal laboratory code	CEC_091
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	Bangladesh
Price without tax	98.95
Currency	US
Fabric composition	Shell 1 100% Nylon/ Shell 2 86% Recycled Polyester 14% Spandex

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.16
PFPeA	0.25
PFHxA	0.98
PFHpA	0.47
PFOA	2.5
PFNA	0.19
PFDA	0.27
PFUnA	<LOD
PFDoA	0.19
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	0.04
PFOcDA	<LOD
PFBS	0.14
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**5.2**

Data D16. Adult outdoor jacket

Internal laboratory code	CEC_107
Item category	Adult Outdoor Jacket
Country of purchase	Mexico
Country of manufacture	Vietnam
Price without tax	715.08
Currency	MXN

Fabric composition	Exterior 92% Polyester 8% Elastane; Forro 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.18
PFPeA	<LOD
PFHxA	0.17
PFHpA	0.05
PFOA	1.2
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	0.19
PFHxDA	0.10
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.09
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**2.0**

Data D17. Adult outdoor jacket

Internal laboratory code	CEC_059
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	65
Currency	US

Fabric composition	Shell 100% Nylon; Mesh Lining 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.25
PFHpA	<LOD
PFOA	1.6
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.9**

Data D18. Adult outdoor jacket

Internal laboratory code	CEC_111
Item category	Adult Outdoor Jacket
Country of purchase	Mexico
Country of manufacture	Vietnam
Price without tax	541.17
Currency	MXN

Fabric composition	Exterior 92% Polyester 8% Elastane; Forro 100% Polyester

Analyte	**Concentration as per WP1 (ng /g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.15
PFHpA	0.10
PFOA	0.68
PFNA	0.12
PFDA	0.45
PFUnA	<LOD
PFDoA	0.20
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	0.04
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.7**

Data D19. Adult outdoor jacket

Internal laboratory code	CEC_082
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	China
Price without tax	N.A.
Currency	US
Fabric composition	Body: 66% Cotton/ 34% Polyamide ; Lining: 100% Cotton ; Sleeve Lining: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.04
PFHxA	0.43
PFHpA	0.03
PFOA	0.52
PFNA	0.03
PFDA	0.20
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.03
PFHpS	<LOD
PFOS	0.05
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.03
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	0.01
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.37**

Data D20. Adult outdoor jacket

Internal laboratory code	CEC_083
Item category	Adult Outdoor Jacket
Country of purchase	USA
Country of manufacture	China
Price without tax	149.99
Currency	US

Fabric composition	Shell Fabric 1 Face 100% Polyester / Middle 100% Polyurethane / Back 100% Polyester / Shell Fabric 2 87% Polyester, 13% Elastane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.11
PFHpA	0.04
PFOA	0.28
PFNA	0.11
PFDA	0.13
PFUnA	<LOD
PFDoA	0.03
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.01
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.72**

Data D21. Adult poncho / rainsuit

Internal laboratory code	CEC_019
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	103
Currency	MXN

Fabric composition	100% PVC alta resistencia
	Durable y resistante

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	1.0
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.0**

Data D22. Adult poncho / rainsuit

Internal laboratory code	CEC_016
Item category	Adult poncho / rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	3
Currency	C$

Fabric composition	PVC
	Waterproof

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	0.17
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.17**

Data D23. Adult poncho / rainsuit

Internal laboratory code	CEC_017
Item category	Adult poncho / rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	1.5
Currency	C$

Fabric composition	Vinyl
	Waterproof

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D24. Adult poncho / rainsuit

Internal laboratory code	CEC_116
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	138
Currency	MXN
Fabric composition	100% EVA

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	3.0
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**3.0**

Data D25. Adult poncho / rainsuit

Internal laboratory code	CEC_001
Item category	Adult poncho / rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	2.49
Currency	C$

Fabric composition	Lightweight PE fabric

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.50
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.50**

Data D26. Adult poncho / rainsuit

Internal laboratory code	CEC_027
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	68
Currency	MXN

Fabric composition	100% Vinyl

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D27. Adult poncho / rainsuit

Internal laboratory code	CEC_029
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	68
Currency	MXN

Fabric composition	100% EVA etil vinil acetato

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D28. Adult poncho / rainsuit

Internal laboratory code	CEC_060
Item category	Adult poncho / rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	8.99
Currency	US

Fabric composition	EVA

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D29. Adult poncho / rainsuit

Internal laboratory code	CEC_117
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	100
Currency	MXN

Fabric composition	100% PVC

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D30. Adult poncho / rainsuit

Internal laboratory code	CEC_137
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	NA
Price without tax	130
Currency	MXN

Fabric composition	Vinyl

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D31. Adult poncho / rainsuit

Internal laboratory code	CEC_068
Item category	Adult poncho / rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	11.99
Currency	US

Fabric composition
PVC free

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D32. Adult poncho / rainsuit

Internal laboratory code	CEC_062
Item category	Adult poncho / rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	39.99
Currency	US

Fabric composition	Shell(Face) Polyurethane; Shell(Back) 100% Polyester; Lining 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.04
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.04**

Data D33. Adult poncho / rainsuit

Internal laboratory code	CEC_003
Item category	Adult poncho / rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	N.A.
Currency	C$

Fabric composition	100% PVC on polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.03
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.03**

Data D34. Adult poncho / rainsuit

Internal laboratory code	CEC_005
Item category	Adult poncho / rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	14.99
Currency	C$

Fabric composition	(PVC) polyvinylchloride

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D35. Adult poncho / rainsuit

Internal laboratory code	CEC_020
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	270
Currency	MXN

Fabric composition	PVC

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D36. Adult poncho / rainsuit

Internal laboratory code	CEC_028
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	138
Currency	MXN

Fabric composition	100% EVA

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D37. Adult poncho / rainsuit

Internal laboratory code	CEC_057
Item category	Adult poncho / rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	23.59
Currency	US

Fabric composition	PVC (100%)

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D38. Adult poncho / rainsuit

Internal laboratory code	CEC_058
Item category	Adult poncho / rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	25
Currency	US

Fabric composition	Polyester (100%)

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D39. Adult poncho / rainsuit

Internal laboratory code	CEC_121
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	NA
Price without tax	195
Currency	MXN

Fabric composition	Not Available

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D40. Adult poncho / rainsuit

Internal laboratory code	CEC_136
Item category	Adult poncho / rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	400
Currency	MXN

Fabric composition	Not available

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D41. Baby mats, pads, or blankets

Internal laboratory code	CEC_061
Item category	Baby mats, pads, or blankets
Country of purchase	USA
Country of manufacture	China
Price without tax	20.96
Currency	C$

Fabric composition	Top Layer 100% Natural Cotton; Inner Layer 100% Bonded Polyester; Bottom Layer 100% Polyester with Urethane Barrier
	No Chemicals, Bleaches, Dyes or Resins, PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.09
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.09
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.18**

Data D42. Baby mats, pads, or blankets

Internal laboratory code	CEC_097
Item category	Baby mats, pads, or blankets
Country of purchase	Canada
Country of manufacture	China
Price without tax	49
Currency	C$

Fabric composition	Front: 80% Polyester 20% Cotton; Back and Filling: 100% Polyester
	Water-resistant

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.24
PFHpA	<LOD
PFOA	1.0
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	11
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**12**

Data D43. Baby mats, pads, or blankets

Internal laboratory code	CEC_044
Item category	Baby mats, pads, or blankets
Country of purchase	USA
Country of manufacture	China
Price without tax	17.99
Currency	US

Fabric composition	Top 100% Organic Cotton; Middle 100% Polyester; Back 100% Organic Cotton Laminated to TPU
	Waterproof/breathable TPU film to protect mattress from soiling

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	3.0
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**3.0**

Data D44. Baby mats, pads, or blankets

Internal laboratory code	CEC_135
Item category	Baby mats, pads, or blankets
Country of purchase	Mexico
Country of manufacture	China
Price without tax	59.9
Currency	MXN

Fabric composition	100% PEVA

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.43
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.43**

Data D45. Baby/children's bibs

Internal laboratory code	CEC_043
Item category	Baby/children's bibs
Country of purchase	USA
Country of manufacture	China
Price without tax	17.54
Currency	US

Fabric composition	Face and Binding: 80% Cotton/ 20% Polyester; Inner: 100% Polyurethane
	Azo free dyes, formaldehyde free, PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D46. Baby/children's bibs

Internal laboratory code	CEC_023
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	20.5
Currency	MXN

Fabric composition	58% poliester; 42% algodon (forro: 100% poliester; bies: 100% poliester)
	Evita manchas en la ropa

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D47. Baby/children's bibs

Internal laboratory code	CEC_008
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	7.79
Currency	C$

Fabric composition	100% Nylon Coated Polyurethane
	Lead, BPA, PVC & phthalate free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.64
PFHxA	3.1
PFHpA	0.78
PFOA	5.8
PFNA	0.51
PFDA	3.0
PFUnA	<LOD
PFDoA	1.1
PFTrDA	<LOD
PFTeDA	0.70
PFHxDA	0.21
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**16**

Data D48. Baby/children's bibs

Internal laboratory code	CEC_032
Item category	Baby/children's bibs
Country of purchase	USA
Country of manufacture	China
Price without tax	5.99
Currency	US

Fabric composition	100% PEVA
	Phthalate free

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.09
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.09**

Data D49. Baby/children's bibs

Internal laboratory code	CEC_065
Item category	Baby/children's bibs
Country of purchase	USA
Country of manufacture	China
Price without tax	6.89
Currency	US

Fabric composition	Front 75% Cotton/25% Polyester; Back 100% PEVA
	PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D50. Baby/children's bibs

Internal laboratory code	CEC_063
Item category	Baby/children's bibs
Country of purchase	USA
Country of manufacture	China
Price without tax	13.09
Currency	C$

Fabric composition	100% Polyester
	Stain resistant

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.74
PFNA	<LOD
PFDA	0.30
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.0**

Data D51. Baby/children's bibs

Internal laboratory code	CEC_009
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	China
Price without tax	2.99
Currency	C$

Fabric composition	100% polyester
	Waterproof

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.05
PFHxA	0.12
PFHpA	<LOD
PFOA	0.43
PFNA	<LOD
PFDA	0.28
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	0.06
PFHxDA	0.04
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.99**

Data D52. Baby/children's bibs

Internal laboratory code	CEC_147
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	China
Price without tax	27.5
Currency	C$

Fabric composition	Body and Lining: 100% Cotton

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.35
PFHpA	<LOD
PFOA	0.45
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.17
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.97**

Data D53. Baby/children's bibs

Internal laboratory code	CEC_114
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	52
Currency	MXN

Fabric composition	Tela 100% Polyester; Exterior 100% Vinyl

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.84
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.84**

Data D54. Baby/children's bibs

Internal laboratory code	CEC_115
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	32
Currency	MXN

Fabric composition	100% PVC

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.60
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.60**

Data D55. Baby/children's bibs

Internal laboratory code	CEC_113
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	28
Currency	MXN

Fabric composition	Frente: 65% Polyester 35% Cotton; Bies 100% Cotton; Base PVC

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.42
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.07
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.49**

Data D56. Baby/children's bibs

Internal laboratory code	CEC_124
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	34.03
Currency	MXN

Fabric composition	Material 100% PVC semi transparent; Base 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.34
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.34**

Data D57. Baby/children's bibs

Internal laboratory code	CEC_105
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	14
Currency	MXN

Fabric composition	recubrimiento 100% PVC; superficie 70% Polyester 30% Cotton; Bies 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.20
PFNA	0.03
PFDA	0.06
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.29**

Data D58. Baby/children's bibs

Internal laboratory code	CEC_122
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	68
Currency	MXN

Fabric composition	Base 100% Polyester; Cover 100% Vinyl

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.24
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.24**

Data D59. Baby/children's bibs

Internal laboratory code	CEC_010
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	China
Price without tax	4.99
Currency	C$

Fabric composition	Terry 75/25 Cotton/Polyester; lining 100% PEVA

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.08
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	0.10
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.18**

Data D60. Baby/children's bibs

Internal laboratory code	CEC_104
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	21
Currency	MXN

Fabric composition	Base PVC 65% Polyester 35% Cotton; Bies 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.13
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.13**

Data D61. Baby/children's bibs

Internal laboratory code	CEC_012
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	China
Price without tax	3.5
Currency	C$

Fabric composition	100% Polyester (with PVC backing)

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.13
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.13**

Data D62. Baby/children's bibs

Internal laboratory code	CEC_011
Item category	Baby/children's bibs
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	7.99
Currency	C$

Fabric composition	Vinyl coated polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.07
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.07**

Data D63. Baby/children's bibs

Internal laboratory code	CEC_021
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	68
Currency	MXN

Fabric composition	Material 100% PVC semi transparente; Bies 100% poliester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D64. Baby/children's bibs

Internal laboratory code	CEC_022
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	38
Currency	MXN

Fabric composition	Soporte 100% PVC; Tela 100% poliester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D65. Baby/children's bibs

Internal laboratory code	CEC_024
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	58
Currency	MXN

Fabric composition	Insumo: 100% poliester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D66. Baby/children's bibs

Internal laboratory code	CEC_026
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	54
Currency	MXN

Fabric composition	100% PVC

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D67. Baby/children's bibs

Internal laboratory code	CEC_072
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	20
Currency	MXN

Fabric composition	Base PVC; Front 65% Polyester 35% Cotton; Outer Edge 100% Cotton

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D68. Baby/children's bibs

Internal laboratory code	CEC_073
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	44
Currency	MXN

Fabric composition	Tela impresa : 100% Polyester; Toalla 85% Cotton 15% Polyester; Relleno 100% Polyester; Bies 63% Polyester 37% Cotton

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D69. Baby/children's bibs

Internal laboratory code	CEC_074
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	48
Currency	MXN

Fabric composition	Tela 62% Polyester 38% Cotton; Forro 55% Polyester 45% Cotton

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D70. Baby/children's bibs

Internal laboratory code	CEC_123
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	34.03
Currency	MXN

Fabric composition	Base 100% Polyester; Cover 100% Vinyl

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D71. Baby/children's bibs

Internal laboratory code	CEC_150
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	25
Currency	MXN

Fabric composition	Not available

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D72. Baby/children's bibs

Internal laboratory code	CEC_151
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	25
Currency	MXN

Fabric composition	Not available

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D73. Baby/children's bibs

Internal laboratory code	CEC_152
Item category	Baby/children's bibs
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	25
Currency	MXN

Fabric composition	Not available

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D74. Children's outdoor jackets

Internal laboratory code	CEC_034
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	China
Price without tax	27.74
Currency	US

Fabric composition	100% polyester
	waterproof seam taped; Teflon Shield+ fabric protector

Analyte	Concentration as per WP1 (ng/g)
PFBA	1.0
PFPeA	1.0
PFHxA	3.5
PFHpA	0.86
PFOA	1.9
PFNA	0.05
PFDA	0.57
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**9.0**

Data D75. Children's outdoor jackets

Internal laboratory code	CEC_036
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	84.95
Currency	US

Fabric composition	100% Polyester; Exterior 100% Nylon

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	36
PFPeA	1.1
PFHxA	13
PFHpA	0.75
PFOA	0.39
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.07
PFHpS	7.4
PFOS	0.44
PFDS	<LOD
6:2 FTCA	1.9
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	0.51
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**62**

Data D76. Children's outdoor jackets

Internal laboratory code	CEC_069
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	64.95
Currency	US

Fabric composition	GN: Main body Shell 100% Nylon/ Collar, Main Body, Pocket Bags Lining: 100% Polyester/ Hood, Sleeves, Rain Guard Tunnel Lining: 100% Nylon

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	1.3
PFHpA	0.99
PFOA	8.6
PFNA	0.69
PFDA	3.3
PFUnA	<LOD
PFDoA	0.55
PFTrDA	<LOD
PFTeDA	0.14
PFHxDA	0.03
PFOcDA	<LOD
PFBS	0.25
PFHxS	1.5
PFHpS	<LOD
PFOS	0.86
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.30
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**19**

Data D77. Children's outdoor jackets

Internal laboratory code	CEC_052
Item category	Children's outdoor jackets
Country of purchase	Canada
Country of manufacture	China
Price without tax	19.98
Currency	C$

Fabric composition	100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	1.2
PFNA	<LOD
PFDA	3.7
PFUnA	<LOD
PFDoA	2.9
PFTrDA	<LOD
PFTeDA	0.81
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**8.7**

Data D78. Children's outdoor jackets

Internal laboratory code	CEC_110
Item category	Children's outdoor jackets
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	599
Currency	MXN

Fabric composition	Vista 100% Polyamide (Nylon); Forro 50% Cotton 50% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.46
PFHpA	0.14
PFOA	1.7
PFNA	<LOD
PFDA	0.75
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**3.1**

Data D79. Children's outdoor jackets

Internal laboratory code	CEC_076
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	India
Price without tax	90
Currency	US

Fabric composition	Upper Body, Lower Body, Lining: 100% Nylon / Insulation: 100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	1.8
PFNA	0.80
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**2.6**

Data D80. Children's outdoor jackets

Internal laboratory code	CEC_085
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	China
Price without tax	36
Currency	US

Fabric composition	100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.18
PFPeA	0.06
PFHxA	0.71
PFHpA	0.06
PFOA	0.64
PFNA	0.13
PFDA	0.29
PFUnA	0.03
PFDoA	0.05
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.03
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**2.2**

Data D81. Children's outdoor jackets

Internal laboratory code	CEC_106
Item category	Children's outdoor jackets
Country of purchase	Mexico
Country of manufacture	China
Price without tax	358
Currency	MXN

Fabric composition	Exterior 100% Polyester; Forro 100% Polyester; Relleno 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.12
PFHpA	0.09
PFOA	0.91
PFNA	0.32
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.03
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.5**

Data D82. Children's outdoor jackets

Internal laboratory code	CEC_087
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	69.95
Currency	US

Fabric composition	Body 100% Polyester, Lining 70% Polyester 30% Nylon

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.14
PFHpA	0.06
PFOA	0.39
PFNA	0.06
PFDA	0.11
PFUnA	<LOD
PFDoA	0.04
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.34
PFHpS	<LOD
PFOS	0.03
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.05
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.2**

Data D83. Children's outdoor jackets

Internal laboratory code	CEC_086
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	49.95
Currency	US

Fabric composition	100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.03
PFHpA	<LOD
PFOA	0.24
PFNA	0.08
PFDA	0.08
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.04
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.47**

Data D84. Children's outdoor jackets

Internal laboratory code	CEC_088
Item category	Children's outdoor jackets
Country of purchase	USA
Country of manufacture	Bangladesh
Price without tax	49.95
Currency	US

Fabric composition	100% Nylon

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.14
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.14**

Data D85. Children's poncho/rainsuit

Internal laboratory code	CEC_040
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	14.95
Currency	US

Fabric composition	100% EVA

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D86. Children's poncho/rainsuit

Internal laboratory code	CEC_064
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	6.95
Currency	US

Fabric composition	100% PEVA
	PVC free, lead free, and phthalate safe

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D87. Children's poncho/rainsuit

Internal laboratory code	CEC_102
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	500.25
Currency	MXN

Fabric composition	Exterior: 65% Polyester 35% Polyurethane; Relleno: 100% Polyester; Forro: 100% Polyester
	PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.08
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.08**

Data D88. Children's poncho/rainsuit

Internal laboratory code	CEC_035
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	29.95
Currency	US

Fabric composition	100% Polyester
	Wear outdoors in the rain and dirt

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.46
PFHpA	0.23
PFOA	6.7
PFNA	0.13
PFDA	5.0
PFUnA	<LOD
PFDoA	2.0
PFTrDA	<LOD
PFTeDA	0.67
PFHxDA	0.20
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	1.6
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	3.1
10:2 FTCA	4.8
4:2 FTS	<LOD
6:2 FTS	0.20
8:2 FTS	19
10:2 FTS	15
6:2 FTUA	<LOD
8:2 FTUA	1.2
10:2 FTUA	1.0
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**61**

Data D89. Children's poncho/rainsuit

Internal laboratory code	CEC_146
Item category	Children's poncho/rainsuit
Country of purchase	Canada
Country of manufacture	Vietnam
Price without tax	42
Currency	C$

Fabric composition	Body 100% Polyester; Center Back Panel 100% Polyester; Pocket Bags 100% Polyester; Hood Lining 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.40
PFPeA	0.38
PFHxA	2.1
PFHpA	0.76
PFOA	3.3
PFNA	0.32
PFDA	2.1
PFUnA	<LOD
PFDoA	0.79
PFTrDA	<LOD
PFTeDA	0.52
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**11**

Data D90. Children's poncho/rainsuit

Internal laboratory code	CEC_133
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	free
Currency	MXN

Fabric composition	97% Polyamide 3% Elastane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	1.1
PFHpA	<LOD
PFOA	3.7
PFNA	0.72
PFDA	1.9
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	0.05
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**7.4**

Data D91. Children's poncho/rainsuit

Internal laboratory code	CEC_132
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	75
Currency	MXN

Fabric composition	PVC

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.74
FOSA	<LOD
MeFOSA	0.30
EtFOSA	<LOD
Σ_{31}PFAS	**1.0**

Data D92. Children's poncho/rainsuit

Internal laboratory code	CEC_054
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	18.99
Currency	US

Fabric composition	Shell 100% Polyurethane; Binding 100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.51
PFNA	<LOD
PFDA	0.47
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.98**

Data D93. Children's poncho/rainsuit

Internal laboratory code	CEC_118
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	298
Currency	MXN

Fabric composition	Exterior 100% PVC; Interior Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.47
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	0.47

Data D94. Children's poncho/rainsuit

Internal laboratory code	CEC_004
Item category	Children's poncho/rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	Not available
Currency	C$

Fabric composition	100% Polyvinylchloride

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D95. Children's poncho/rainsuit

Internal laboratory code	CEC_030
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	158
Currency	MXN

Fabric composition	Polietileno vinil acetato

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D96. Children's poncho/rainsuit

Internal laboratory code	CEC_031
Item category	Children's poncho/rainsuit
Country of purchase	Mexico
Country of manufacture	China
Price without tax	158
Currency	MXN

Fabric composition	Polietileno vinil acetato

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D97. Children's poncho/rainsuit

Internal laboratory code	CEC_038
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	10.99
Currency	US

Fabric composition	100% Vinyl

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D98. Children's poncho/rainsuit

Internal laboratory code	CEC_070
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	7.99
Currency	US

Fabric composition	Shell: 100% Polyurethane/ Lining: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D99. Children's poncho/rainsuit

Internal laboratory code	CEC_084
Item category	Children's poncho/rainsuit
Country of purchase	USA
Country of manufacture	China
Price without tax	54
Currency	US

Fabric composition	Outer Shell 100% Polyurethane / Backing and Lining 100% Polyester
	PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D100. Children's poncho/rainsuit

Internal laboratory code	CEC_144
Item category	Children's poncho/rainsuit
Country of purchase	Canada
Country of manufacture	China
Price without tax	44.99
Currency	C$

Fabric composition	100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D101. Cycling jackets

Internal laboratory code	CEC_130
Item category	Cycling jackets
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	39.95
Currency	C$

Fabric composition	100% Polyester
	Reflective Scotchlite® strips on front & back (3M)

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	1.2
PFPeA	1.9
PFHxA	9.3
PFHpA	11
PFOA	51
PFNA	6.7
PFDA	42
PFUnA	2.3
PFDoA	9.8
PFTrDA	0.67
PFTeDA	2.6
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.04
PFHxS	<LOD
PFHpS	<LOD
PFOS	11
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	1.9
4:2 FTS	<LOD
6:2 FTS	0.51
8:2 FTS	11
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	0.31
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**163**

Data D102. Cycling jackets

Internal laboratory code	CEC_131
Item category	Cycling jackets
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	179.95
Currency	C$

Fabric composition	Shell 100% Nylon laminated to PTFE; Backing 100% Nylon
	Scotchlite® reflective strips on front, back and sides (3M)

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	118
PFPeA	3.5
PFHxA	61
PFHpA	10
PFOA	2.2
PFNA	<LOD
PFDA	6.9
PFUnA	<LOD
PFDoA	0.08
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	246
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	0.19
10:2 FTCA	2.0
4:2 FTS	<LOD
6:2 FTS	1.0
8:2 FTS	<LOD
10:2 FTS	3.2
6:2 FTUA	16
8:2 FTUA	0.5
10:2 FTUA	<LOD
FOSA	0.86
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**472**

Data D103. Fire retardant

Internal laboratory code	CEC_033
Item category	Fire retardant/flame resistant
Country of purchase	USA
Country of manufacture	Mexico
Price without tax	56.99
Currency	US

Fabric composition	100% Cotton
	Flame resistant

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.43
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.43**

Data D104. Fire retardant

Internal laboratory code	CEC_047
Item category	Fire retardant/flame resistant
Country of purchase	Canada
Country of manufacture	China
Price without tax	249.99
Currency	C$

Fabric composition	100% Polyamide with Polyurethane laminate
	Pertex® shield membrane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	8.4
PFHpA	6.0
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**14.4**

Data D105. Fire retardant

Internal laboratory code	CEC_126
Item category	Fire retardant/flame resistant
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	free
Currency	MXN

Fabric composition	100% Cotton (300g/m^2)
	Given free of charge

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	66
10:2 FTCA	210
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	2.9
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	18.3
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**298**

Data D106. Fire retardant

Internal laboratory code	CEC_002
Item category	Fire retardant/flame resistant
Country of purchase	Canada
Country of manufacture	South Korea
Price without tax	Not available
Currency	C$
Fabric composition	Brand aramid fibers (80% Nomex; 20% Kevlar); Lining 70% cotton, 30% polyester); non-slip silicone grip

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D107. Bed linens

Internal laboratory code	CEC_079
Item category	Bed linens
Country of purchase	USA
Country of manufacture	China
Price without tax	16.99
Currency	US

Fabric composition	Cover :100% Polyester with Thermoplastic Polyurethane Laminate
	Allergen barrier

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D108. Bed linens

Internal laboratory code	CEC_109
Item category	Bed linens
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	247.5
Currency	MXN

Fabric composition	Toalla 90% Cotton 10% Polyester; Plastic Case 100% PVC

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.20
PFHxA	0.26
PFHpA	<LOD
PFOA	0.67
PFNA	0.08
PFDA	0.12
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.3**

Data D109. Bed linens

Internal laboratory code	CEC_039
Item category	Bed linens
Country of purchase	USA
Country of manufacture	Not Available
Price without tax	16.95
Currency	US

Fabric composition	80% Cotton; 20% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D110. Miscellaneous items

Internal laboratory code	CEC_096
Item category	Miscellaneous items
Country of purchase	Canada
Country of manufacture	China
Price without tax	45
Currency	C$

Fabric composition	Shell: 100% Polyester; Coating: 100% Polyurethane; Lining: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.26
PFPeA	0.33
PFHxA	1.3
PFHpA	0.81
PFOA	5.8
PFNA	2.2
PFDA	10
PFUnA	0.69
PFDoA	3.2
PFTrDA	0.10
PFTeDA	1.0
PFHxDA	0.09
PFOcDA	<LOD
PFBS	0.05
PFHxS	0.02
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	0.62
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**27**

Data D111. Miscellaneous items

Internal laboratory code	CEC_067
Item category	Miscellaneous items
Country of purchase	USA
Country of manufacture	China
Price without tax	19
Currency	US

Fabric composition	Shell: Synthetic Leather 25% PU, 15% nylon; Back 40% Polyester, 10% Neoprene; Lining 100% Thinsulate

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D112. Miscellaneous items

Internal laboratory code	CEC_095
Item category	Miscellaneous items
Country of purchase	Canada
Country of manufacture	China
Price without tax	9
Currency	C$

Fabric composition	Shell: 100% Polyester; Backside: 100% Polyurethane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.70
PFPeA	<LOD
PFHxA	1.2
PFHpA	0.60
PFOA	5.2
PFNA	0.35
PFDA	3.4
PFUnA	<LOD
PFDoA	1.09
PFTrDA	<LOD
PFTeDA	0.41
PFHxDA	0.12
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.21
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.75
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**14**

Data D113. Miscellaneous items

Internal laboratory code	CEC_134
Item category	Miscellaneous items
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	135.6
Currency	MXN

Fabric composition	100% Vinyl

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.69
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.69**

Data D114. Snowsuits/snow hats

Internal laboratory code	CEC_129
Item category	Snowsuits or snow hats
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	29.95
Currency	C$

Fabric composition	100% Polyester exclusive of trim
	Silmond® microfibre polyester; Cozy Polartec® Microfleece liner

Analyte	Concentration as per WP1 (ng/g)
PFBA	1.0
PFPeA	0.61
PFHxA	2.0
PFHpA	0.80
PFOA	2.0
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.26
8:2 FTS	0.54
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**7.4**

Data D115. Snowsuits/snow hats

Internal laboratory code	CEC_092
Item category	Snowsuits or snow hats
Country of purchase	Canada
Country of manufacture	Bangladesh
Price without tax	130
Currency	C$

Fabric composition	Face 92% Polyester, 8% Spandex; Back 100% Polyester
	Dupont Teflon™ protector

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.06
PFHpA	<LOD
PFOA	0.20
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.26**

Data D116. Snowsuits/snow hats

Internal laboratory code	CEC_098
Item category	Snowsuits or snow hats
Country of purchase	Canada
Country of manufacture	China
Price without tax	105
Currency	C$

Fabric composition	Shell 100% Polyester; Coating: 100% Polyurethane; Lining 100% Nylon; Insulation 100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.20
PFHpA	<LOD
PFOA	0.65
PFNA	0.48
PFDA	<LOD
PFUnA	0.07
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.06
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.5**

Data D117. Snowsuits/snow hats

Internal laboratory code	CEC_053
Item category	Snowsuits or snow hats
Country of purchase	Canada
Country of manufacture	China
Price without tax	29.98
Currency	C$

Fabric composition	Bouded side 100% Polyester; Exterior/ Shell 96% Polyester, 4% Elastane

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.33
PFHpA	<LOD
PFOA	0.75
PFNA	<LOD
PFDA	0.29
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.4**

Data D118. Snowsuits/snow hats

Internal laboratory code	CEC_100
Item category	Snowsuits or snow hats
Country of purchase	Canada
Country of manufacture	Bangladesh
Price without tax	120
Currency	C$

Fabric composition	Shell 1 100% Polyester; Shell 2 100% Polyester; Shell 3 100% Polyamide; Insulation 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.12
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.09
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.25
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.46**

Data D119. Snowsuits/snow hats

Internal laboratory code	CEC_055
Item category	Snowsuits or snow hats
Country of purchase	USA
Country of manufacture	China
Price without tax	19.99
Currency	US

Fabric composition	Outer soft tricot fabric; Waterproof TPU (Thermoplastic polyurethane) membrane; Inner lining of polar fleece

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.08
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.08**

Data D120. Sport gloves

Internal laboratory code	CEC_041
Item category	Sport gloves
Country of purchase	USA
Country of manufacture	China
Price without tax	35.91
Currency	US

Fabric composition	Backhand: 92% Polyester, 8% Elastane; Palm: 100% Polyurethane; Lining: 100% Polyester; Wadding: 100% Polyester
	Gore-Tex

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	4.6
PFPeA	0.29
PFHxA	1.0
PFHpA	0.35
PFOA	1.8
PFNA	0.09
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.03
PFHxS	0.16
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**8.4**

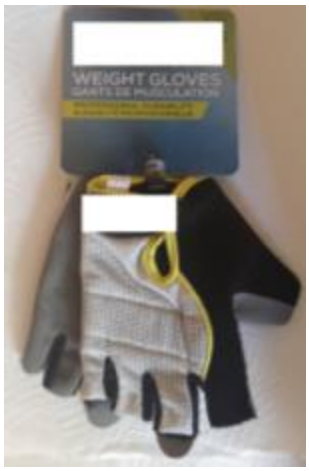
Data D121. Sport gloves

Internal laboratory code	CEC_018
Item category	Sport gloves
Country of purchase	Mexico
Country of manufacture	Pakistan
Price without tax	53
Currency	MXN

Fabric composition	95% Polyamide; 3% Elastane
	Thermo Fit & Dry Tech

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.98
PFPeA	0.03
PFHxA	0.13
PFHpA	<LOD
PFOA	0.06
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.06
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**1.3**

Data D122. Sport gloves



Internal laboratory code	CEC_143
Item category	Sport gloves
Country of purchase	Canada
Country of manufacture	Malaysia
Price without tax	6.98
Currency	C$

Fabric composition	5% Synthetic Leather, 15% SBR Rubber, 35% Polyester & Nylon, 5% Cotton
	Professional durability

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	3.9
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.01
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**3.9**

Data D123. Waterproof trousers

Internal laboratory code	CEC_056
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	China
Price without tax	29.99
Currency	US

Fabric composition	240T Pongee fabric with a transparent TPU membrane; 30D tricot membrane; Neoprene and Velcro adjustable ankle cuffs
	100% PVC free

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.37
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.06
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.44**

Data D124. Waterproof trousers

Internal laboratory code	CEC_080
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	179
Currency	US

Fabric composition	100% Nylon

Analyte	Concentration as per WP1 (ng/g)
PFBA	2.0
PFPeA	3.8
PFHxA	19
PFHpA	3.0
PFOA	4.2
PFNA	0.58
PFDA	3.3
PFUnA	<LOD
PFDoA	0.94
PFTrDA	<LOD
PFTeDA	0.53
PFHxDA	0.13
PFOcDA	0.03
PFBS	0.17
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.15
8:2 FTS	1.1
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**39**

Data D125. Waterproof trousers

Internal laboratory code	CEC_125
Item category	Waterproof trousers
Country of purchase	Mexico
Country of manufacture	Mexico
Price without tax	450
Currency	MXN

Fabric composition	60% Cotton 40% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	0.18
PFPeA	0.18
PFHxA	0.70
PFHpA	0.55
PFOA	5.5
PFNA	16
PFDA	6.0
PFUnA	3.7
PFDoA	0.14
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.04
8:2 FTS	0.82
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	1.4
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**35**

Data D126. Waterproof trousers

Internal laboratory code	CEC_128
Item category	Waterproof trousers
Country of purchase	Canada
Country of manufacture	Canada
Price without tax	98.95
Currency	C$

Fabric composition	100% Nylon laminated to Polyurethane

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.41
PFPeA	<LOD
PFHxA	1.2
PFHpA	<LOD
PFOA	0.91
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	1.5
10:2 FTCA	9.8
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	20
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	1.3
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**35**

Data D127. Waterproof trousers

Internal laboratory code	CEC_078
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	China
Price without tax	99
Currency	US

Fabric composition	GB: Shell 100% Polyester/ Handpocket Bags Lining 100% Polyester/Front Panel, Back Panel, Leg Gaiter and Below Panel Lining 100% Nylon; Insulation: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	0.41
PFPeA	<LOD
PFHxA	1.2
PFHpA	<LOD
PFOA	0.91
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	1.5
10:2 FTCA	9.8
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	20
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	1.3
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**35**

Data D128. Waterproof trousers

Internal laboratory code	CEC_051
Item category	Waterproof trousers
Country of purchase	Canada
Country of manufacture	China
Price without tax	17.48
Currency	C$

Fabric composition	Shell 100% Nylon; Lining Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	0.19
PFHxA	1.2
PFHpA	0.28
PFOA	4.0
PFNA	0.22
PFDA	2.0
PFUnA	0.08
PFDoA	0.47
PFTrDA	<LOD
PFTeDA	0.10
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.06
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**8.5**

Data D129. Waterproof trousers

Internal laboratory code	CEC_081
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	Vietnam
Price without tax	36
Currency	US

Fabric composition	Shell 100% Nylon

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.40
PFHpA	0.36
PFOA	0.80
PFNA	2.0
PFDA	0.12
PFUnA	0.33
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.04
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	0.04
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**4.1**

Data D130. Waterproof trousers

Internal laboratory code	CEC_048
Item category	Waterproof trousers
Country of purchase	Canada
Country of manufacture	Bangladesh
Price without tax	89.99
Currency	C$

Fabric composition	Shell 100% Nylon; Lining 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	1.1
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	0.54
PFHpS	<LOD
PFOS	0.36
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**2.0**

Data D131. Waterproof trousers

Internal laboratory code	CEC_045
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	China
Price without tax	25
Currency	US

Fabric composition	Shell: 100% Polyurthane; Backing: 100% Polyester

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	0.15
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	0.03
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.18**

Data D132. Waterproof trousers

Internal laboratory code	CEC_037
Item category	Waterproof trousers
Country of purchase	USA
Country of manufacture	China
Price without tax	18.99
Currency	US

Fabric composition	100% Polypropylene

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**

Data D133. Winter gloves

Internal laboratory code	CEC_138
Item category	Winter gloves
Country of purchase	Canada
Country of manufacture	China
Price without tax	49.99
Currency	C$

Fabric composition	100% Polyester shell; 50% Down 50% Feather insulation fill
	Outech®

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	0.22
PFHpA	0.78
PFOA	78
PFNA	0.10
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.01
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**79**

Data D134. Winter gloves

Internal laboratory code	CEC_140
Item category	Winter gloves
Country of purchase	Canada
Country of manufacture	China
Price without tax	34.99
Currency	C$

Fabric composition	Shell 100% Leather; Microvel Lining 100% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	1.8
PFHpA	0.15
PFOA	7.8
PFNA	<LOD
PFDA	8.7
PFUnA	<LOD
PFDoA	0.75
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.02
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**19**

Data D135. Winter gloves

Internal laboratory code	CEC_101
Item category	Winter gloves
Country of purchase	Canada
Country of manufacture	China
Price without tax	20
Currency	C$

Fabric composition	Shell 100% Polyester; Palm &Insert 100% Vinyon; Lining & Interlining 100% Polyester;

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	0.16
PFHxA	2.3
PFHpA	0.23
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	0.02
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**2.7**

Data D136. Winter gloves

Internal laboratory code	CEC_042
Item category	Winter gloves
Country of purchase	USA
Country of manufacture	China
Price without tax	24.49
Currency	US

Fabric composition	Top of Hand: 92% Nylon, 8% Polyurethane; Palm: 60% Polyurethane, 40% Nylon; Palm/ Fingertip Patches: 60% PVC/ 30% Polyester/ 10% Cotton; Cuff: 75% Neoprene/ 15% PVC/ 5% Velcro/ 5% Nylon; Thumb: 80% Cotton; 20% Polyester; Forchettes: 94% Nylon, 6% Spandex; Inner liner: 100% Polyester; Waterproof: 100% Polyurethane; Insulation: 65% Olefine/ 35% Polyester

Analyte	Concentration as per WP1 (ng/g)
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	0.07
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	0.30
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	0.02
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**0.39**

Data D137. Winter gloves

Internal laboratory code	CEC_142
Item category	Winter gloves
Country of purchase	Canada
Country of manufacture	China
Price without tax	19.99
Currency	C$

Fabric composition	80% Acrylic 5% Polyester 5% Spandex 5% Rubber Strings 5% Conductive Fibre
	Touch screen gloves

Analyte	**Concentration as per WP1 (ng/g)**
PFBA	<LOD
PFPeA	<LOD
PFHxA	<LOD
PFHpA	<LOD
PFOA	<LOD
PFNA	<LOD
PFDA	<LOD
PFUnA	<LOD
PFDoA	<LOD
PFTrDA	<LOD
PFTeDA	<LOD
PFHxDA	<LOD
PFOcDA	<LOD
PFBS	<LOD
PFHxS	<LOD
PFHpS	<LOD
PFOS	<LOD
PFDS	<LOD
6:2 FTCA	<LOD
8:2 FTCA	<LOD
10:2 FTCA	<LOD
4:2 FTS	<LOD
6:2 FTS	<LOD
8:2 FTS	<LOD
10:2 FTS	<LOD
6:2 FTUA	<LOD
8:2 FTUA	<LOD
10:2 FTUA	<LOD
FOSA	<LOD
MeFOSA	<LOD
EtFOSA	<LOD
Σ_{31}PFAS	**<LOD**