

Protecting from PFAS – together, we can do it.

Chemicals and consumables for
routine testing



Chemicals and consumables for routine testing of PFAS

Per- and polyfluorinated alkyl substances (PFAS) are manufactured chemicals that have been used in a wide variety of common consumer products and industrial activities. Known as “forever chemicals” because they do not break down and can bioaccumulate. As such, there is an increasing need for robust, reliable methods: which includes using chemicals and consumables that are fit for purpose for PFAS analyses.

Detecting PFAS at trace levels in the environment is key to their remediation. PFAS contamination, can be determined, depending on the sample matrix, by one of several regulatory methods including global ASTM regulations, the Stockholm Convention on persistent organic pollutants (POPs), the EU Drinking Water Directive, and U.S. EPA Methods 1633, 8327, 533, and 537.1, and OTM-45.

If you are following one of these methods, or are using an in-house method, let us help you find the right chemicals and consumables for your PFAS applications.

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Setting a new horizon for PFAS workflow solutions

The detection and quantification of known PFAS and the discovery of unknown PFAS has never been more important. Determining the best workflow for your PFAS analysis can be challenging. Optimal methods will vary depending on the matrix you are working with and goals of your analysis. There are strategies to help you with either targeted analysis of known PFAS compounds or the discovery of unknowns, from a variety of matrices.

Whether you need just a single item to complete an analysis or everything from sample preparation to chromatography and mass spectrometry to data analysis software, we have you covered. We offer solutions for problems at any step of your analytical process, no matter the size or scope of your PFAS project.



Additional reading

Links	Type	Description
	Brochure	Setting a new horizon for PFAS workflow applications
	Learn more	thermofisher.com/forever-chemicals



Download application note

Learn about a reliable, sensitive method using a PFAS-safe sample preparation system and LC-MS/MS.



Download application note

Read about a method for determining 24 PFAS compounds from ground, surface, and wastewaters using LC-MS/MS.



Download application note

Learn more about determination of per- and polyfluorinated alkyl substances (PFAS) in drinking water

Chemical solutions

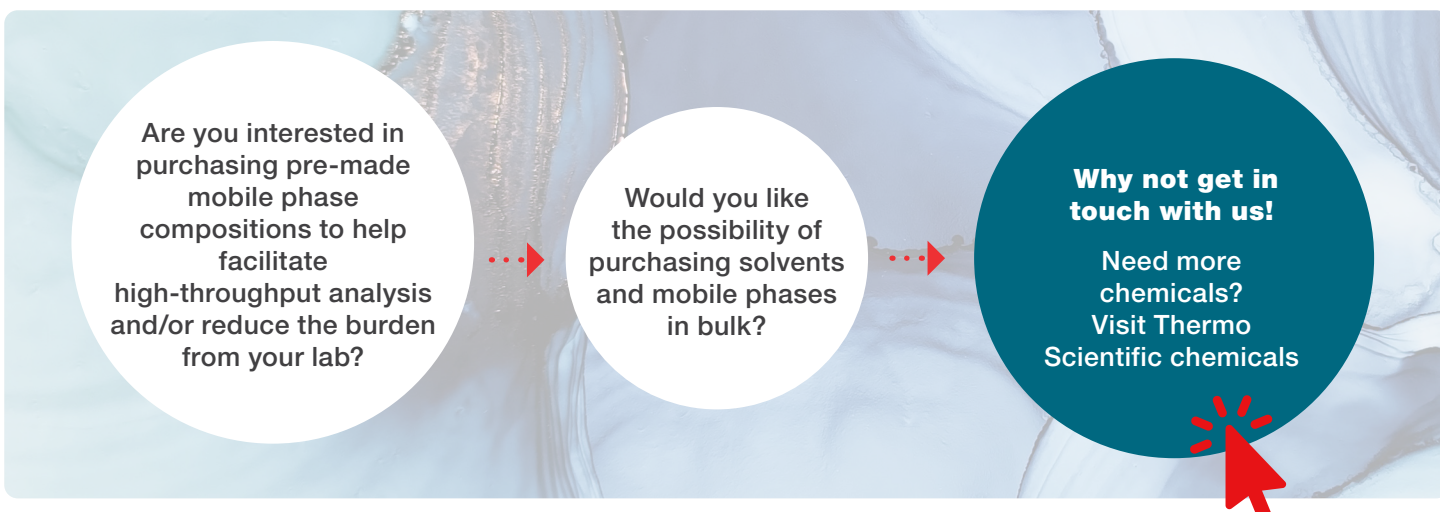
Achieve maximum performance in your PFAS analysis

Solvents and reagents play an important role as part of the sample preparation steps - and in making up the chromatography mobile phase. In order to deliver the results you expect, we recommend the use of UHPLC grade solvents, to ensure they have the purity and specification you need for PFAS analysis.

Chemicals

Description	Quantity	Cat. no
Acetonitrile*, UHPLC-MS, Thermo Scientific Chemicals	1 L	A9561
	6 x 1 L	A9561CS
Methanol*, UHPLC-MS, Thermo Scientific Chemicals	1 L	A9561CS
	6 x 1 L	A4581CS
Water*, UHPLC-MS, Thermo Scientific Chemicals	1 L	W81
	6 x 1 L	W81CS
Acetone*, 99.9%, for residue analysis, Thermo Scientific Chemicals	1 L	423240010
Toluene*, HPLC Grade, 99.7% min, Thermo Scientific Chemicals	1 L	610110040
Dichloromethane*, for residue and pesticide analysis, Thermo Scientific Chemicals	1 L	326600010
	2.5 L	326600025
Acetic acid*, 50%, Thermo Scientific Chemicals	5 L	456870050
	25 mL	270480250
Formic acid*, 99%, Thermo Scientific Chemicals	1 L	270480010
	2.5 L	270480025
Ammonium acetate*, 97%, Thermo Scientific Chemicals	250 g	A16343.30
	1 kg	A16343.0B
	5 kg	A16343.0I
Ammonium hydroxide*, ACS, 28.0-30.0% NH ₃ , Thermo Scientific Chemicals	250 g	033285.30
	1 kg	033285.A1
	5 x 1 kg	033285.D9

*This product may not be available to purchase on thermofisher.com in certain countries



Minimize risks of contamination with consumables

Due to the increased use of PFAS, there are many different risks of contamination to the analysis. Care must be taken during sample preparation, sample handling and analysis, particularly as detection limits are in the low to sub-ppt range. It is not only recommended to ensure risks of contamination is minimized in the laboratory but also with your chromatography solution. You can minimize the risk of contamination to your chromatographic equipment by using our PFAS kit (includes PFAS-free tubing, fittings), solvent filter inlets and our isolator column. Changing the tubing and using an isolator column as part of the solution, to separate out the analytical PFAS from the system PFAS, will result in more accurate quantitation.



PFAS columns overview

Isolator columns

The use of an isolator column is necessary when analysing PFAS, as it helps to separate background contaminants from sample analytes, allowing for a more accurate sample result. For this we recommend Thermo Scientific™ Accucore™ C18 column.

Analytical columns

For high retentivity and large volume direct injections a fully porous column such as Thermo Scientific™ Acclaim™ C18 column has excellent peak shape for PFAS analyses. A fully porous column with larger surface volume has more stationary phase to appropriately separate the analytes. For methods where smaller sample injection volumes are employed, Thermo Scientific™ Accucore™ RP-MS column is recommended. The Accucore column is a solid-core that provides excellent chromatographic separation and maintains robustness in challenging water matrices.

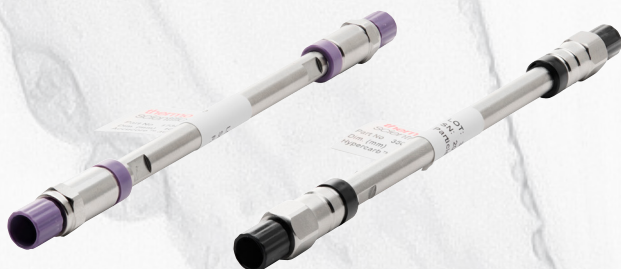
Guard columns

Use a guard column to prolong the lifetime of your analytical column. A guard column is a protective column installed between the injector and the analytical column. It serves to remove the impurities, particulate contaminants, suspended solids and highly absorptive compounds from samples from reaching the analytical column. Read more about prolonging the lifetime of analytical column [here](#).

The Thermo Scientific™ Acclaim™ and Thermo Scientific™ Accucore™ guard columns are used for PFAS within the industry.

Recommended columns

Isolation columns	Analytical columns	Guard columns
Accucore C18 column	Acclaim C18 column Accucore RP-MS column	Acclaim guard column Accucore guard column



Consumables solutions

Choose from one of the below products for your PFAS applications

Analytical and guard columns for in-house/EU method, U.S. EPA method 1633, 533 and 537

Group	Description	Quantity	Cat. no
PFAS kit	PFAS-free tubing, isolator column, fittings, solvent filter inlets	Each	80100-62142
Column	Thermo Scientific™ Acclaim™ 120 C18 Column, 2.2 µm, 2.1 mm × 100 mm	Each	068982
Column	Thermo Scientific™ Acclaim™ Polar Advantage HPLC Column, 2.2 µm, 2.1 mm × 100 mm	Each	072623
Guard cartridges	Thermo Scientific™ Acclaim™ 120 C18 Guard Cartridge Column, 5 µm, 2.1 mm × 10 mm	Pack of 2	069689
Guard holder	Thermo Scientific™ Acclaim™ Guard Holder and Coupler	Each	069707
Column	Thermo Scientific™ Accucore™ RP-MS Column, 2.6 µm, 2.1 mm × 100 mm	Each	17626-102130
Column	Thermo Scientific™ Accucore™ RP-MS Column, 2.6 µm, 2.1 mm × 150 mm	Each	17626-152130
Guard cartridge	Thermo Scientific™ Accucore™ RP-MS, 2.1 mm × 10 mm, Guard Cartridges	Pack of 4	17626-012105
Guard holder	Thermo Scientific™ Universal Uniguard™ Holder for 2.1/3.0 mm ID	Each	852-00

Analytical and guard columns for U.S. EPA method 8327

Group	Description	Quantity	Cat. no
Column	Accucore RP-MS Column, 2.6 µm, 2.1 mm x 100 mm	Each	17626-102130

Would you like to learn more about quality columns that generate the quality results?

Need more columns for your laboratory?

Why not get in touch with us!
Learn more about our HPLC and UHPLC columns

Consumables solutions (continued)

PFAS sample handling solutions overview

Vials, caps, well plates and mats

To assure a robust method with accurate results use an inert vial, either a poly propylene or a GOLD-grade vial. The importance of using highly inert materials for compounds containing chemical functional groups with strong electronegativity is imperative, particularly for analytes with lower concentrations like PFAS. Learn the benefits of inert glass in this [white paper](#).



Caps and septa

To assure no contamination for PFAS, we recommend a solid aluminum disk with a silicone sealing ring.

Vials and caps for in-house/EU method

Group	Description	Quantity	Cat. no
Vials	Thermo Scientific™ SureSTART™ 0.4 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-04PP
Vials	Thermo Scientific™ SureSTART™ 1.5 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-1PP
Caps	Thermo Scientific™ SureSTART™ clear PP 9 mm screw caps with integral PP membrane	100/pack	C5000-50
Caps	Thermo Scientific™ SureSTART™ blue PP 9 mm screw caps with Advanced Vial Closure System (AVCS™) closure, solid aluminum disk with silicone sealing ring	100/pack	C5000-56AL
Vials	Thermo Scientific™ SureSTART™ 0.8 mL PP snap top microvials, flat bottom, Level 1 Everyday Analysis	100/pack	6ERV11-08PPFB
Vials	Thermo Scientific™ SureSTART™ 0.8 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-08PPC
Vials	Thermo Scientific™ SureSTART™ 0.3 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-03PPC
Caps	Thermo Scientific™ SureSTART™ blue PE 11 mm snap caps with blue PP septa, Level 1 Everyday Analysis	100/pack	6ERC11PE

Vials and caps for U.S. EPA method 1633

Group	Description	Quantity	Cat. no
Vials	SureSTART 0.4 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-04PP
Vials	SureSTART 1.5 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-1PP
Caps	SureSTART clear PP 9 mm screw caps with integral PP membrane	100/pack	C5000-50
Caps	SureSTART blue PP 9 mm screw caps with AVCS closure, solid aluminum disk with silicone sealing ring	100/pack	C5000-56AL

Consumables solutions (continued)

Vials and Caps for U.S. EPA method 533 and 537

Group	Description	Quantity	Cat. no
Vials	SureSTART 0.4 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-04PP
Vials	SureSTART 1.5 mL clear PP 9 mm screw microvial, conical insert	100/pack	6ESV9-1PP
Caps	SureSTART clear PP 9 mm screw caps with integral PP membrane	100/pack	C5000-50
Caps	T SureSTART blue PP 9 mm screw caps with AVCS closure, solid aluminum disk with silicone sealing ring	100/pack	C5000-56AL
Vials	SureSTART 0.8 mL PP snap top microvials, flat bottom, Level 1 Everyday Analysis	100/pack	6ERV11-08PPFB
Vials	SureSTART 0.8 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-08PPC
Vials	SureSTART 0.3 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-03PPC
Caps	SureSTART blue PE 11 mm snap caps with blue PP septa, Level 1 Everyday Analysis	100/pack	6ERC11PE

Vials and caps for U.S. EPA method 8327

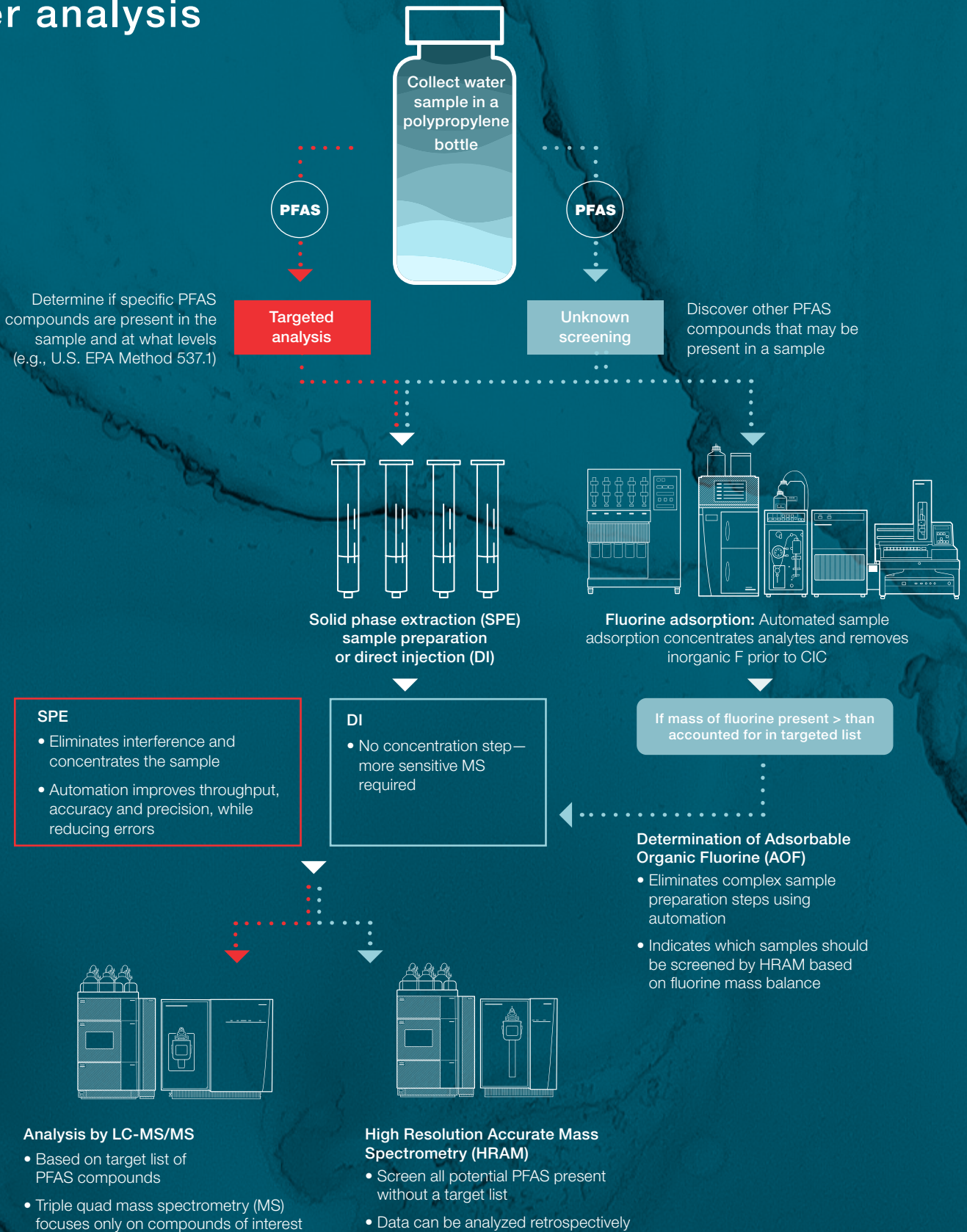
Group	Description	Quantity	Cat. no
Vials	SureSTART 0.8 mL PP snap top microvials, flat bottom, Level 1 Everyday Analysis	100/pack	6ERV11-08PPFB
Vials	SureSTART 0.8 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-08PPC
Vials	SureSTART 0.3 mL PP snap top microvials, conical insert, Level 1 Everyday Analysis	100/pack	6ERV11-03PPC
Caps	SureSTART blue PE 11 mm snap caps with blue PP septa, Level 1 Everyday Analysis	100/pack	6ERC11PE

Well plates and mats

Group	Description	Quantity	Cat. no
Well plate	Thermo Scientific™ WebSeal™ 96-Well Deep Well Plates, non-coated plastic, round U-bottom, 1000 µL	50/pack	60180-P201
Well plate mat	Thermo Scientific™ WebSeal™ 96-Well Plate Sealing Mat, 7 mm diameter, round	100/pack	60180-M179
Well plate	Thermo Scientific™ WebSeal™ 96-Well Deep Well Plates, non-coated plastic, square V-bottom, 2000 µL	50/pack	60180-P202
Well plate mat	Thermo Scientific™ WebSeal 96-Well Plate Sealing Mat, 8 mm diameter, square	100/pack	60180-M121

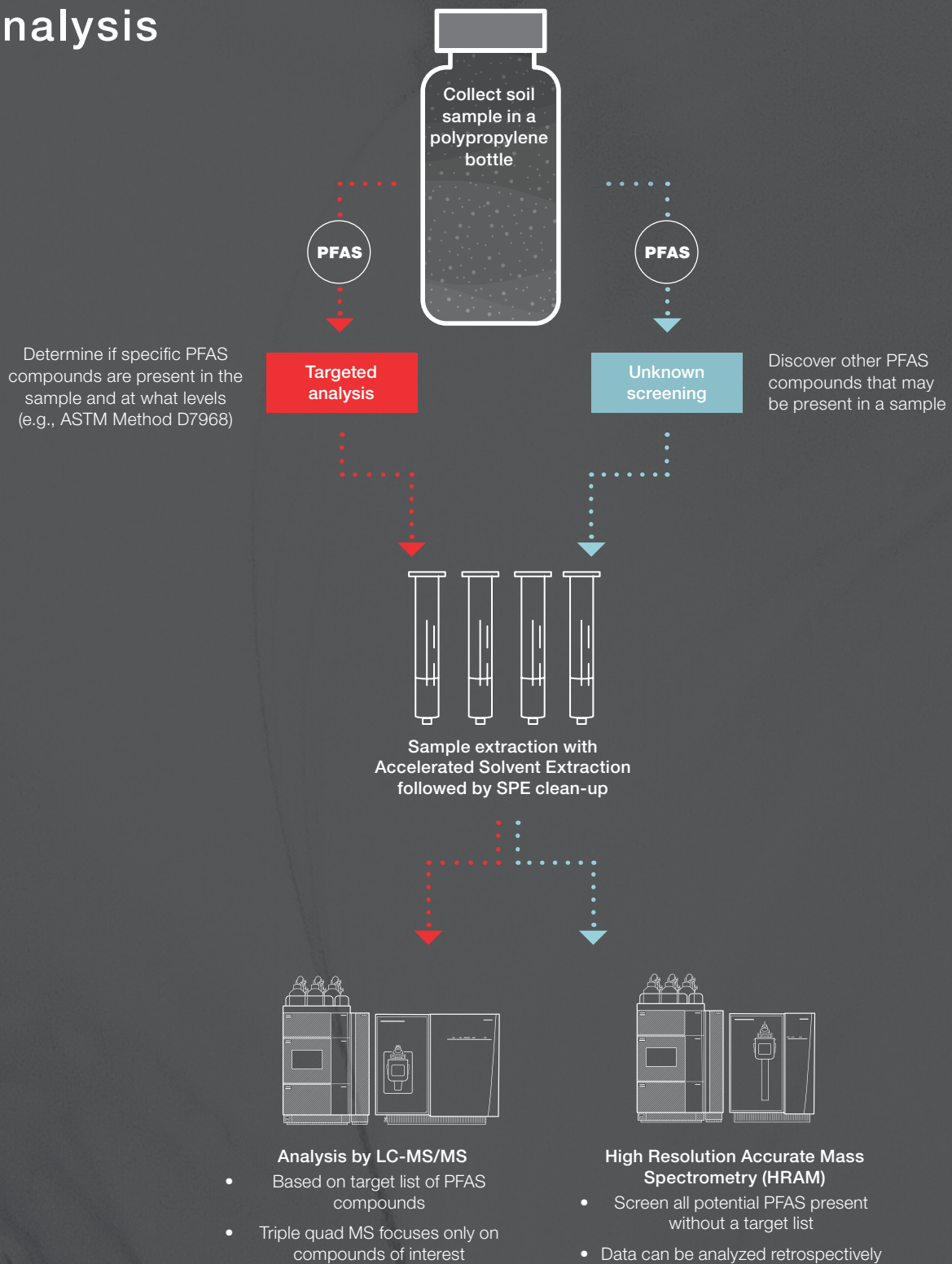
Start-to-finish PFAS analytical solutions

Water analysis



Start-to-finish PFAS analytical solutions

Soil analysis



Related workflow products

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