PFAS TESTING SOLUTIONS 2024

All you need for PFAS Analysis in one place

Greyhound CHROMATOGRAPHY AND ALLIED CHEMICALS

YOUR GLOBAL SCIENCE PARTNER

6 Kelvin Park Birkenhead Merseyside CH41 1LT United Kingdom

Tel: +44 (0) 151 649 4000 ● E: info@greyhoundchrom.com ● www.greyhoundchrom.com

As a global supplier of chromatography consumables and reference standards, Greyhound Chromatography have brought together in this catalogue, the best products for the analysis of PFAS compounds from the leading manufacturers in the field.

PFAS (per and polyfluoroalkyl substances) is the collective name for almost 5000 compounds which have been produced since the 1940s. These compounds are not naturally occurring in nature so the problems of global pollution are entirely the result of human activity. The utility of these compounds has resulted in their rapid adoption which has resulted in them being found in cookware, stain repellents, food packaging, cosmetics, firefighting foams and many manufacturing processes.

PFAS are known as 'forever chemicals' in that they are very persistent in the environment and the human body, resulting in increasing health risks including damage to immune systems, cancer and thyroid hormone disruption.

Considerable research has been undertaken to develop products which are specifically suited for the analysis of PFAS by HPLC, from sample preparation, through to analytical detection.

This brochure brings together many of the leading products used in PFAS analysis, including the analysis of samples in water, soil, food and beverages as well as serum samples.

INDEX

Product selection according to ISO 21675:2019, DIN 38407-42, EPA 537.1, 533, 8327 and FDA C-010.01 guidelines

Method → Product type ↓	ISO 21675:2019 & DIN 38407-42	EPA 537.1	EPA 533	EPA 8327	FDA C-010.01
SPE Columns	CHROMABOND® HR-XAW **Part No. 730747**	CHROMABOND® HR-X **Part No. 730931P45**	CHROMABOND® HR-XAW **Part No. 730748P45**		CHROMABOND® PFAS **Part No. 730283**
dSPE Centrifuge Tubes	CHROMABOND® PFAS **Part No. 730283**	CHROMABOND® HR-X **Part No. 730939**	CHROMABOND® HR-XAW **Part No. 730745** CHROMABOND® PFAS **Part No. 730283**	Direct Injection	CHROMABOND® QuEChERS Mix XII **Part No. 730648** CHROMABOND® QuEChERS Mix L **Part No. 7300008** CHROMABOND® QuEChERS Mix XX **Part No. 730670.20**

CHROMABOND® PFAS is a polymer-based combination phase which contains a weak anion exchange functionality. The combination of different SPE phases makes it possible to use various interactions (dipole-dipole, ionic, hydrophobic, H-bond).

SPE product solutions – CHROMABOND® HR-X and HR-XAW

According to DIN 38407-42, EPA 537.1 and 533 guidelines, MACHEREY-NAGEL also offers further SPE product solutions for the enrichment of PFAS:

- n CHROMABOND® HR-X: hydrophobic PS / DVB copolymer
- n CHROMABOND® HR-XAW: weak mixed mode anion exchanger (WAX) PS / DVB copolymer

These allow outstanding recovery rates and high reproducibility

SPE column, CHROMABOND® PFAS

PFAS in food using QuEChERS extraction and clean-up method

QuEChERS ("Quick, Easy, Cheap, Effective, Rugged and Safe") sample preparation products from MACHEREY-NAGEL ensure a time efficient and simple extraction of PFAS from food and a subsequent solid phase extraction for further sample clean-up
according to procedure C-010.01 developed by the US Food and Drug Administration (FDA) for the measurement of 16 PFAS in food.
There are CHROMABOND® QuEChERS mixes available that are especially suitable for sample preparation of PFAS in: Dairy products, Bread, Lettuce and Fish

dSPE Columns, CHROMABOND® QuEChERS Mix XII, 15 mL centrifuge tubes, CHROMABOND® QuEChERS Mix XX, 2 mL centrifuge tubes

Chromabond PFAS SPE COLUMNS

Over the years many different PFAS were developed. Now, they are found in the environment (water, food, soil, animals and humans) and their problematic health effects come into play. The challenge is that current analytical methods are limited.

To tackle this challenge, Macherey Nagel developed a special phase for the enrichment of a broad range of PFAS which provides good reproducibility and high recovery rates.

This is possible due to the different interactions the sorbent combination offers. These interactions are recommended by DIN 38407-42, EPA 537.1 and 533 guidelines.

The CHROMABOND PFAS is a polymer-based combination phase which contains a weak anion exchange functionality. The combination of different SPE phases makes it possible to use various interactions (dipole-dipole, ionic, hydrophobic, H-bond).

CHROMABOND PFAS provides several advantages

- Solution for various PFAS substance classes
- > 28 PFAS can be enriched
- Sorbent retention mechanisms according to DIN 38407-42, EPA 537.1 and 533 guidelines
- High capacity
- High recovery rates

Chromabond HR-XAW SPE COLUMNS

This state-of-the-art spherical polymer has been developed for the highest demands in solid phase extraction. PS/DVB copolymer with secondary and tertiary ammonium modification for mixed-mode SPE with weak anion exchange and reversed-phase properties (WAX). Exchange capacity > 0.5 meq/g, pKa 6 + 9 and RP capacity 350 mg/g (caffeine in water).

High-purity material with ideal flow properties and highest reproducibility, with extremely low blind values due to an optimized production process. Outstanding recovery rates especially for the enrichment of acidic (strong acids with pKa < 1) analytes.

Chromabond HR-X SPE COLUMNS

A spherical, hydrophobic polystyrene-divinylbenzene resin in SPE columns. High-purity material with highest reproducibility and lowest blank values due to an optimized manufacturing process. Excellent recovery rates especially for the enrichment of pharmaceuticals/active ingredients due to the spherical structure of the particles, very homogeneous surface, and optimized pore structure.

The advantages of QuEChERS ("Quick, Easy, Cheap, Effective, Rugged and Safe") products in comparison with classical clean-up methods include:

- Easy to handle and time-saving procedure as well as no need for glassware (convenient and economical)
- Low consumption of solvents and no need for chlorinated solvents (environmentally friendly)
- Broad range of pesticides can be detected and rugged method with high and safe recovery rates (reliable and good performance).

These are the demands of modern sample preparation. The QuEChERS (pronounced as “catchers”) method, introduced by Anastassiades et al. in 2003, and their continuous development created an expansion of ready-to-use mixtures. QuEChERS became the method of choice in sample preparation for the analysis of pesticides and drugs in fruit, vegetables and other matrices. **CHROMABOND QuEChERS Mix L is ideal for PFAS analysis.**

Chromabond QuEChERS Mix L

Part No.	**7300008**
QuEChERS method	Clean-up
Brand	CHROMABOND
Mode	Dispersive SPE (dSPE)
Composition	900mg $MgSO_4$ 30 mg Diamino (PSA), 150mg Carbon
Matrix properties	Higher content of chlorophyll and carotinoids (pigments)
Recommended application(s)	PFAS in food (e.g. milk, curd cheese, quark, bread, brussel sprouts, spinach, eggs), QuEChERS, Sample preparation
Column type	Centrifuge tube, 15mL with screw cap
Column volume	15mL
Hardware	Polypropylene (PP)
$MgSO_4$	900mg $MgSO_4$
Diamino (PSA)	300mg Diamino (PSA)
Carbon	150mg Carbon
Storage temperature	RT
Scope of delivery	1 x 50 centrifuge tubes (15 mL) filled with QuEChERS Mix, Certificate of analysis
Hazardous material	No

Chromabond QuEChERS Mix XII

Part No.	**730648**
QuEChERS method	Extraction, original
Brand	CHROMABOND
Phase	Mix XII
Mode	Dispersive SPE (dSPE)
Composition	4000mg $MgSO_4$ 1000mg NaCl
Recommended application(s)	Food samples, Forensic and drug samples, Pesticides, QuEChERS, Sample preparation
Column type	Centrifuge tube, 15mL with screw cap
Column volume	15mL
Hardware	Polypropylene (PP)
$MgSO_4$	4000mg $MgSO_4$
NaCl	1000mg NaCl
Storage temperature	RT
Scope of delivery	1 x 50 centrifuge tubes (15mL) filled with QuEChERS Mix, Certificate of analysis
Hazardous material	No

Chromabond QuEChERS Mix XX

Part No.	**730670.2**
QuEChERS method	Clean-up, AOAC 2007.01
Brand	CHROMABOND
Phase	Mix XX
Mode	Dispersive SPE (dSPE)
Composition	150mg $MgSO_4$ 50mg Diamino (PSA)
Matrix properties	Low fat content
Recommended application(s)	Apple, Apricot, Asparagus, Broccoli, Food samples, Forensic and drug samples, Pear, Pesticides, Pineapple, QuEChERS, Sample preparation, Samples with low fat content, Strawberry
Column type	Centrifuge tube, 2mL
Column volume	2mL
Hardware	Polypropylene (PP)
$MgSO_4$	150mg $MgSO_4$
Diamino (PSA)	50mg Diamino (PSA)
Storage temperature	RT
Scope of delivery	10 x 5 centrifuge tubes (2mL) filled with QuEChERS Mix, Certificate of analysis
Hazardous material	No

Chromabond SPE Vacuum Manifolds

The Chromabond SPE system which allows for precise flow control through each SPE tube via rotating, independent, Luer valves (stopcocks) with each port on the manifold cover. Chromabond SPE vacuum manifolds allow you to process up to 12 (12-port version) or 24 (24-port version) PFAS samples simultaneously.

Part No.	Description	Unit
730150N	Vacuum Chamber Standard, 12-port model	Each
730151N	Vacuum Chamber Standard, 24-port model	Each

Ordering Information - SPE columns and dSPE centrifuge tubes

Part No.	Description	Unit
730283	CHROMABOND® PFAS, 85µm, 6 mL / 300 mg	30
730745	CHROMABOND® HR-XAW, 85µm, 6 mL / 500 mg	30
730747	CHROMABOND® HR-XAW, 85µm, 3 mL / 60 mg	30
730931P45	CHROMABOND® HR-X, 45µm, 3 mL / 200 mg	30
730939	CHROMABOND® HR-X, 85µm, 6 mL / 500 mg	30
7300008	CHROMABOND® QuEChERS Mix L Diamino / Carbon clean-up mix consisting of: 900mg MgSO4, 300mg CHROMABOND® Diamino, 150mg CHROMABOND® Carbon, individually weighed and filled into 1 mL centrifuge tubes (PP) with screw cap (PE)	50
730648	CHROMABOND® QuEChERS Mix XII, extraction mix consisting of: 4000 mg MgSO4, 1000mg NaCl, individually weighed and filled into 15mL centrifuge tubes (PP) with screw cap (PE)	50
730670.2	CHROMABOND® QuEChERS Mix XX Diamino clean-up mix (acc. to AOAC) consisting of: 150mg MgSO4, 50mg CHROMABOND® Diamino individually weighed and filled into 2mL centrifuge tubes (PP) with snap cap (PP)	50

NUCLEODUR PFAS, EC HPLC Column (analytical) 3µm, 100 x 2mm

Hydrophobic reversed phase with distinct polar selectivity for special PFAS analysis. Suitability for PFAS analysis is assured through qualified batch analysis. This HPLC phase is made of high purity NUCLEODUR HPLC silica gel and is extensively end capped. Due to a low bleeding characteristics these columns are suitable for high sensitivity LC/MS analysis.

Part No.	**760666.20**
Method	HPLC, analytical
Brand	NUCLEODUR
Base material	NUCLEODUR - high purity silica
Phase	NUCLEODUR PFAS
USP listing	Not available or proprietary
Surface chemistry	Proprietary
Mode	Reversed phase (RP)
Type	EC HPLC column (analytical)
Hardware	Stainless steel
Column length	100 mm
Column inner diameter	2 mm
Particle type	Fully porous particle (FPP)
Particle shape	Spherical
Particle size	3µm
Eluent in HPLC column	Acetonitrile – water
Recommended application(s)	PFAS
End capped	Yes
Carbon content	Not available or proprietary
pH stability	1.0 - 9.0
Pore size	110 Å
Specific surface according to BET	340 m^2/g
Temperature stability (max)	60 °C
Tmax (phosphate buffer)	40 °C
Pressure stability (max)	600 bar
Column volume	0.3mL
Storage temperature	RT
Scope of delivery	1 x analytical HPLC column, instruction leaflet, certificate of analysis + batch document
Hazardous material	No

NUCLEODUR PFAS, EC HPLC Column (analytical) 3µm, 50 x 2mm

Hydrophobic reversed phase with distinct polar selectivity for special PFAS analysis. Suitability for PFAS analysis is assured through qualified batch analysis. This HPLC phase is made of high purity NUCLEODUR HPLC silica gel and is extensively end capped. Due to a low bleeding characteristics these columns are suitable for high sensitivity LC/MS analysis.

Part No.	**760663.20**
Method	HPLC, analytical
Brand	NUCLEODUR
Base material	NUCLEODUR - high purity silica
Phase	NUCLEODUR PFAS
USP listing	Not available or proprietary
Surface chemistry	Proprietary
Mode	Reversed phase (RP)
Type	EC HPLC column (analytical)
Hardware	Stainless steel
Column length	50 mm
Column inner diameter	2 mm
Particle type	Fully porous particle (FPP)
Particle shape	Spherical
Particle size	3 µm
Eluent in HPLC column	Acetonitrile – water
Recommended application(s)	PFAS
End capped	Yes
Carbon content	Not available or proprietary
pH stability	1.0 - 9.0
Pore size	110 Å
Specific surface according to BET	340 m^2/g
Temperature stability (max)	60 °C
Tmax (phosphate buffer)	40 °C
Pressure stability (max)	600 bar
Column volume	0.15mL
Storage temperature	RT
Scope of delivery	1 x analytical HPLC column, instruction leaflet, certificate of analysis + batch document
Hazardous material	No

NUCLEODUR PFAS Delay, EC HPLC Column (analytical) 5µm, 50 x 2mm

NUCLEODUR PFAS Delay columns trap and therefor delay system-related PFAS contaminants, ensuring trace level analysis of PFAS in your samples. This HPLC phase is made of high purity NUCLEODUR HPLC silica gel and is extensively end capped. Due to a low bleeding characteristics these columns are suitable for high sensitivity LC/MS analysis.

Part No.	**760673.20**
Method	HPLC, analytical
Brand	NUCLEODUR
Base material	NUCLEODUR - high purity silica
Phase	NUCLEODUR PFAS Delay
USP listing	Not available or proprietary
Surface chemistry	Proprietary
Mode	Reversed phase (RP)
Type	EC HPLC column (analytical)
Hardware	Stainless steel
Column length	50 mm
Column inner diameter	2 mm
Particle type	Fully porous particle (FPP)
Particle shape	Spherical
Particle size	5 µm
Eluent in HPLC column	Acetonitrile – water
Recommended application(s)	PFAS
End capped	Yes
Carbon content	Not available or proprietary
pH stability	1.0 - 9.0
Pore size	110 Å
Specific surface according to BET	340 m^2/g
Temperature stability (max)	60 °C
Tmax (phosphate buffer)	40 °C
Pressure stability (max)	600 bar
Column volume	0.15 mL
Storage temperature	RT
Scope of delivery	1 x analytical HPLC column, instruction leaflet, certificate of analysis
Hazardous material	No

Sigma Aldrich Sample Preparation Products

Optimized sample clean-up and concentration is vital to achieve accurate and precise results. A range of vacuum manifolds, solid phase extraction (SPE) cartridges, and large volume samplers are available to support your PFAS sample preparation needs (Figure 1).

Figure 1. Visiprep™ large volume samplers, Supelclean™ SPE cartridges, and Visiprep™ vacuum manifolds provide a complete sample preparation solution for PFAS analysis.

Supelclean™ SPE Cartridges

Cat. No	Description
57226	Supelclean™ ENVI™ Chrom P SPE Cartridges, 500 mg
57239-U	Supelclean™ ENVI™ Chrom P SPE Cartridges, 500 mg for use with Gerstel® MPS
54057-U	Supelclean™ ENVI™ WAX™ SPE Cartridges, 500 mg
54056-U	Supelclean™ ENVI™ WAX™ SPE Cartridges, 200 mg

Large Volume SPE Reservoir

Cat. No	Description
54258-U	Large Volume SPE Reservoir, polypropylene body, for use with 6 mL polypropylene SPE tubes, volume 25 mL, pk of 30

Visiprep™ Vacuum Manifolds

Cat. No	Description
57030-U	Standard, 12-port model
57250-U	Standard, 24-port model

Supelclean™ SPE Cartridges

Multiple regulatory methods, such as EPA 537 and 533, detail the extraction of PFAS analytes from drinking water using SPE cartridges followed by analysis by LC/ TQ. Most commonly, weak anion exchange (WAX) cartridges, such as Supelclean™ ENVI -WAX SPE cartridges, are used due to their ability to extract both short and long-chain PFAS analytes with good recoveries as seen in EPA 533 and ISO methods. EPA 537 uses a polystyrene divinylbenzene (PS-DVB) cartridge, such as a Supelclean™ ENVI™-Chrom P SPE cartridge, which offers high recoveries for medium and long-chain PFAS analytes.

Large Volume SPE Reservoirs

Large volume SPE reservoirs are designed to increase the headspace volume of standard polypropylene SPE tubes. Because these reservoirs are designed to connect directly to the mouth of the SPE tube, they are ideal for gravity applications where increased headspace volume is required. The reservoirs are designed for use with 6 mL polypropylene SPE tubes and add an additional headspace volume of 25mL.

Visiprep™ Vacuum Manifolds

The Visiprep™ system contains a patented valve system that allows for precise flow control through each SPE tube via rotating, independent, screw-type valves situated in each port within the manifold cover. Visiprep™ vacuum manifolds allow you to process up to 12 (12-port version) or 24 (24-port version) PFAS samples simultaneously.

Sigma Aldrich HPLC Columns

The Sigma Aldrich HPLC column of choice for PFAS analysis by LC-MS/(MS) is a C18 column based on fully monolithic Chromolith® columns for every matrix-rich samples, or on superficially porous silica particles (SPP) such as Ascentis® Express.

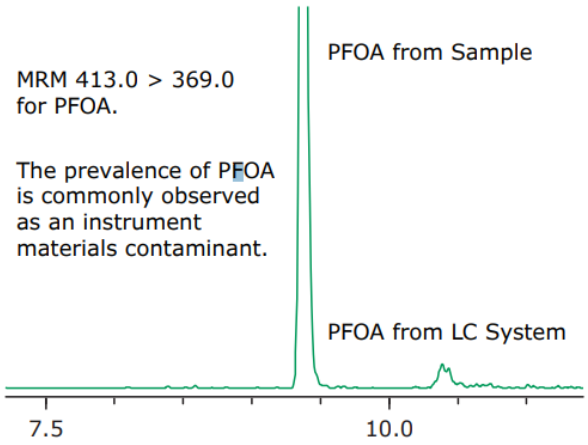
In contrast to ordinary FPP C18 columns Ascentis® Express PFAS columns are tested using a PFAS compound mixture. This ensures the full suitability of the column for PFAS analysis.

The contamination of PFAS compounds from the HPLC system and materials used in analytics is a concern. Therefore, it is recommended to use a delay column, which is placed before injection in the system set-up.

The highly retentive end capped silane of the Ascentis® Express PFAS Delay column provides high retention of PFAS compounds across various mobile phase conditions and is used to delay background instrument PFAS contamination from interference with analyzed samples. For this reason, the Ascentis® Express PFAS Delay column is placed upstream of the sample injector and after the mixer.

The new Ascentis® Express PFAS HPLC column is designed for the separation of novel and legacy short chain and long chain PFAS compounds containing branched and linear isomers, whilst adhering to EPA methodology requirements. The Ascentis® Express PFAS HPLC column, with its Fused-Core® technology and a particle size of 2.7 µm, delivers fast and high-resolution separations with excellent selectivity, peak shape, and necessary retention to perform in EPA methods 537.1, 533 and 8327.

Furthermore, a specific PFAS delay column prevents background PFAS contamination from interfering with the sample results in quantitative LC-MS methods.



Cat. No	Description	Cat. No	Description
Analytical Column		**Corresponding Delay Column**	
Ascentis® Express 90 Å PFAS, 2.7 µm HPLC Column		**Ascentis® Express 90 Å PFAS Delay, 2.7 µm HPLC Column**	
53557-U	L × I.D. 5 cm × 2.1 mm	**53572-U**	L × I.D. 5 cm × 3.0 mm
53559-U	L × I.D. 10 cm × 2.1 mm	**53572-U**	L × I.D. 5 cm × 3.0 mm
53560-U	L × I.D. 15 cm × 2.1 mm	**53572-U**	L × I.D. 5 cm × 3.0 mm
53562-U	L × I.D. 25 cm × 2.1 mm	**53572-U**	L × I.D. 5 cm × 3.0 mm
53563-U	L × I.D. 5 cm × 3.0 mm	**53573-U**	L × I.D. 5 cm × 4.6 mm
53564-U	L × I.D. 10 cm × 3.0 mm	**53573-U**	L × I.D. 5 cm × 4.6 mm
53565-U	L × I.D. 15 cm × 3.0 mm	**53573-U**	L × I.D. 5 cm × 4.6 mm
53570-U	L × I.D. 25 cm × 3.0 mm	**53573-U**	L × I.D. 5 cm × 4.6 mm

Autosampler Vials for PFAS Analysis

The problem of PFAS in the environment

Because Perfluoroalkyl and Polyfluoroalkyl substances do not decompose, they can accumulate over time in the environment and the human body.

There is increasing evidence that exposure to PFAS can adversely affect human health. As a result, regulatory bodies are legislating that many materials should be tested to ensure that they do not contain traces of PFAS or that the traces are below permitted legal limits.

PFAS are widely used in materials such as PTFE, which are commonly used in chemical analysis consumables, therefore, laboratories need new labware products to minimize background contamination from these chemicals.

PTFE contains trace amounts of PFAS, so it is important not to use PTFE faced liners in autosampler vials or sample containers. To overcome this problem, Greyhound supplies vial septa manufactured from a high-purity silicone rubber composition coated with a layer of Polyimide, which is the perfect solution for trace PFAS analysis. The usable temperature range of these caps is up to 130°C, and is suitable for up to 10 injections.

The Polyimide is amber-coloured translucent and the high purity white silicone rubber reduces leaching.

Polypropylene Q-Range™ Wide Neck Screw Top and Snap Cap Vials are the vials recommended for your PFAS analyses

Manufactured from chemical resistant polypropylene, the material is ideal for "PFAS-free" sampling, testing, storage and transportation operations. These lightweight vials are an excellent economical alternative to glass and are designed to work with most autosamplers. The ultra smooth walls of the Q-Range™ vials ensure less adsorption, resulting in far higher recoveries (97% compared to some competitor's vials of only 39%)

Q-Range™ Vial Kits for PFAS Testing

These Q-Range™ Vial Kits for PFAS testing are available in 9mm Wide Neck Screw Top or 11mm Wide Neck Snap Cap versions and include 100 vials and 100 caps. Packaged in sealed clear plastic bags which fit in a bench drawer for easy access and to keep the products clean and dust free.

Greyhound Q-Range™ 9mm Screw Top and 11mm Snap Top vials *are designed to work in robotic arm autosamplers and have a crimp style height combined with the convenience of Screw Thread or Snap Cap configuration.*

Silicone/Polyimide Compatibility Chart

	Acetonitrile	Methanol	THF	DMF	Alcohols (ethanol)	Ether	Cyclohexane	Acetone	Hydrocarbons	Benzene	Toluene	DMSO	DCM	Acetic Acid	Phenol
Silicone/ Polyimide	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Autosampler Vials for PFAS Analysis

Polypropylene 9mm Screw Top Vials and Closures & Vial Kits

Part No.	Description	Unit
	9mm Screw Thread Vials	
60-100007	100µL to 300µL Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100007-A	100µL to 300µL Amber Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100007-BK	100µL to 300µL Black Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100053	500µL Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100053-A	500µL Amber Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100053-BK	500µL Black Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100053-PK	500µL Pink Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100068	750µL Polypropylene Limited Volume Vial, 12x32mm, 9mm Thread	100
60-100087	1.5mL Polypropylene Vial, 12x32mm, 9mm Thread	100
60-100087-BK	1.5mL Black Polypropylene Vial, 12x32mm, 9mm Thread	100
	9mm Screw Thread Caps	
60-101035-B	9mm Screw Cap, Blue with 1mm Thick Polyimide/Silicone Liner for PFAS Testing	100
60-101094	9mm Open Top Screw Cap, Black with bonded translucent blue silicone/clear Polypropylene for PFAS analysis	100
60-101095	9mm Open Top Screw Cap, Black with bonded translucent blue silicone/clear Polypropylene for PFAS analysis, pre-slit	100

Part No.	Description	Unit
	Screw Thread Vial Kits for PFAS Testing	
60-101498	**Vial Kit - P/Nos 60-100007 and 60-101035-B** 300µL Polypropylene Limited Volume Vials, 9mm Screw Thread, 12x32mm and 9mm Blue Screw Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101499	**Vial Kit - P/Nos 60-100053 and 60-101035-B** 500µL Polypropylene Limited Volume Vial, 9mm Screw Thread, 12x32mm and 9mm Blue Screw Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101500	**Vial Kit - P/Nos 60-100068 and 60-101035-B** 750µL Polypropylene Limited Volume Vial, 9mm Screw Thread, 12x32mm and 9mm Blue Screw Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101501	**Vial Kit - P/Nos 60-100087 and 60-101035-B** 1.5mL Polypropylene Vial, 9mm Thread, 12x32mm and 9mm Blue Screw Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100

Autosampler Vials for PFAS Analysis

Polypropylene 11mm Crimp/Snap Cap Vials and Closures

Part No.	Description	Unit
	11mm Snap Cap Vials	
60-100014	100µL to 300µL Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100014-A	100µL to 300µL Amber Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100014-BK	100µL to 300µL Black Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100016	500µL Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100016-A	500µL Amber Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100016-PK	500µL Pink Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100075	750µL Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100075-A	750µL Amber Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100075-BK	750µL Black Polypropylene Limited Volume Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100076	1.5mL Polypropylene Snap Seal Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100076-A	1.5mL Amber Polypropylene Snap Seal Vial, 12x32mm, 11mm Crimp/Snap Ring	100
60-100076-BK	1.5mL Black Polypropylene Snap Seal Vial, 12x32mm, 11mm Crimp/Snap Ring	100
	11mm Snap Caps	
60-100772-B	11mm Snap Cap, Blue with 1mm Thick Polyimide/Silicone Liner for PFAS Testing	100

Part No.	Description	Unit
	Snap Cap Vial Kits for PFAS Testing	
60-101450	**Vial Kit - P/Nos 60-1000014 and 60-100772-B** 100µL to 300µL Polypropylene Limited Volume Vials, 12x32mm and 11mm Blue Snap Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101451	**Vial Kit - P/Nos 60-100016 and 60-100772-B** 500µL Polypropylene Limited Volume Vial, 12x32mm and 11mm Blue Snap Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101452	**Vial Kit - P/Nos 60-100075 and 60-100772-B** 750µL Polypropylene Limited Volume Vial, 12x32mm and 11mm Blue Snap Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100
60-101453	**Vial Kit - P/Nos 60-100076 and 60-100772-B** 1.5mL Polypropylene Vial, 12x32mm and 11mm Blue Snap Cap, with 1mm thick Polyimide/Silicone Liner for PFAS Testing	100

Solvents for PFAS Analysis

With the increasing requirement for PFAS analysis across a wide spectrum of laboratories, it is very important to ensure unwanted PFAS is not introduced into this critical area of laboratory testing, which includes the preparation of the sample, its injection and the analysis itself.

A cause for concern is the use of solvents containing traces of PFAS. To eliminate this potential problem, Greyhound in cooperation with Biosolve, provide laboratories with PFAS free solvents specifically manufactured to eliminate this potential source of external contamination.

As two of the leading brands of chromatography consumables, reference standards and solvents, we are delighted to offer the three key solvents required for PFAS analysis by HPLC – Acetonitrile, Methanol and Water, **High Resolution UHPLC/MS Grade - PFAS Free.**

To ensure your analysis is free of unexpected PFAS contamination, simply use Biosolve PFAS Free Solvents, save time, money and instrument downtime.

Part No.	Description	Unit
BIO-120H1B1-1	Acetonitrile HR UHPLC/MS 1 Ltr	1 Ltr
BIO-120H1B1	Acetonitrile HR UHPLC/MS 1 Ltr	6 x 1Ltr
BIO-1368H1B1-1	Methanol HR UHPLC/MS 1 Ltr	1 Ltr
BIO-1368H1B1	Methanol HR UHPLC/MS 1 Ltr	6 x 1Ltr
BIO-2321H1B1-1	Water HR UHPLC/MS 1 Ltr	1 Ltr
BIO-2321H1B1	Water HR UHPLC/MS 1 Ltr	6 x 1Ltr

WELLINGTON LABORATORIES PFAS STANDARDS

Wellington Laboratories are the worlds leading source of standards for environmental analysis. Per- and Polyfluoroalkyl Substances (PFAS) are an emerging class of environmental contaminants. Their unique properties create a host of analytical challenges that require the use of native and mass-labelled standards for the generation of accurate data.

The most notable PFAS include PFOS (perfluorooctanesulfonate) and PFOA (perfluorooctanoic acid) and Wellington currently offers multiple mass-labelled and native standards for these compounds to meet your analytical needs.

Details of the full range of PFAS and other environmental standards from Wellington are available on our website -

www.greyhoundchrom.com/pfas-reference-standards-greyhound-chromatography

PFAS TESTING SOLUTIONS

All you need for PFAS Analysis
In one place

- SPE Columns
- QuEChERS
- HPLC Columns
- Vials and Caps
- Standards

MACHEREY-NAGEL · Supelco® Analytical Products · Q Range · WELLINGTON LABORATORIES Standards for Environmental Testing and Research · Biosolve

Greyhound CHROMATOGRAPHY AND ALLIED CHEMICALS

YOUR GLOBAL SCIENCE PARTNER

6 Kelvin Park Birkenhead Merseyside CH41 1LT United Kingdom

Tel: +44 (0) 151 649 4000 ● E: info@greyhoundchrom.com ● www.greyhoundchrom.com