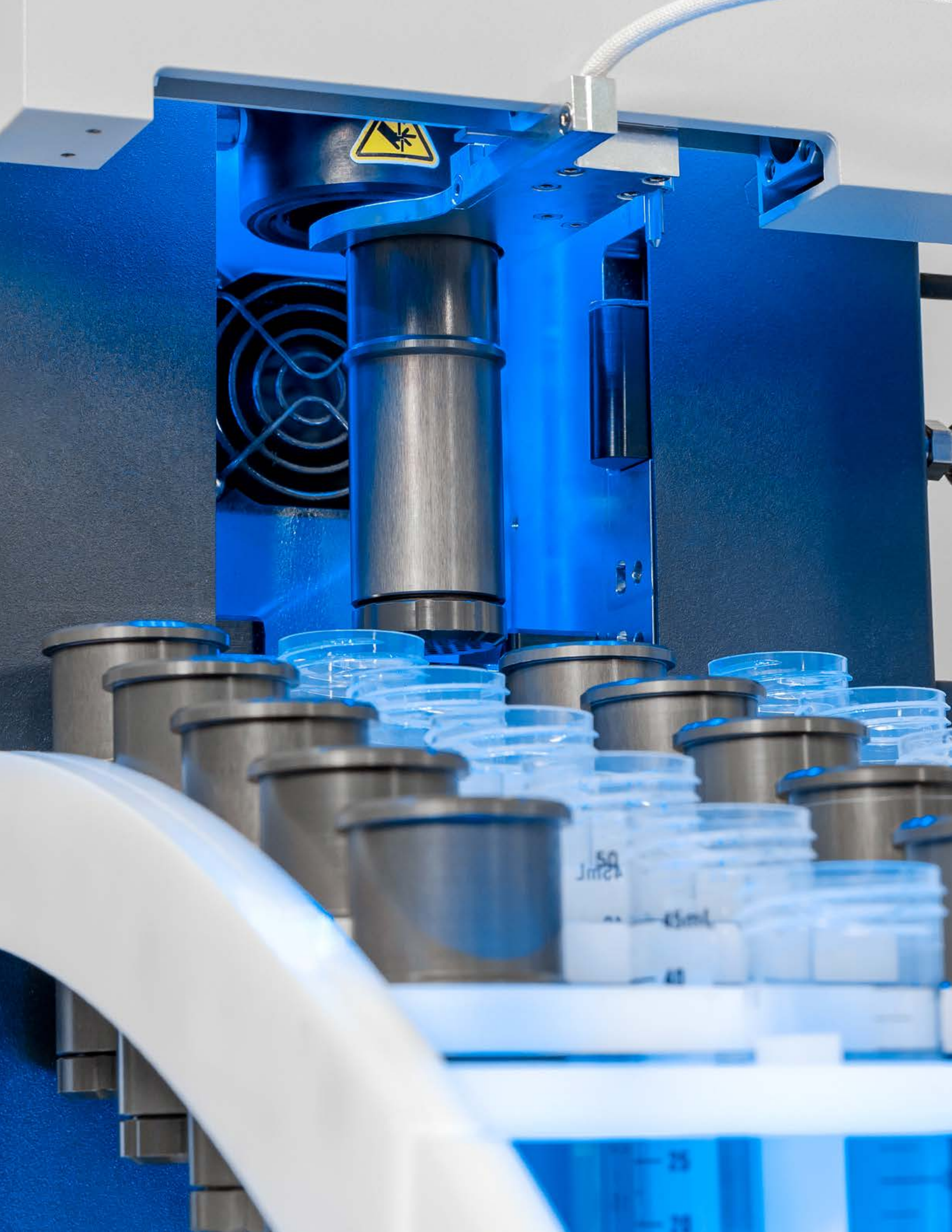


EDGE

CEM



EDGE PFAS™
Automated Extraction System



1.5ml

1.5ml

1.5ml

1.5ml

Automates PFAS extraction.

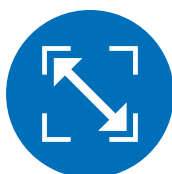
EDGE PFAS is an automated extraction system that's faster than traditional PFAS solvent extraction methods. It meets the performance criteria for EPA Method 1633. The system extracts, filters, cools, and performs an extensive wash step prior to loading the next sample. The EDGE PFAS has revolutionized the extraction process for sample preparation.



Fastest Technique Available



Q-Cup® Sample Holders are
Easy to Assemble and Clean



Small Footprint



Clean and PFAS-free

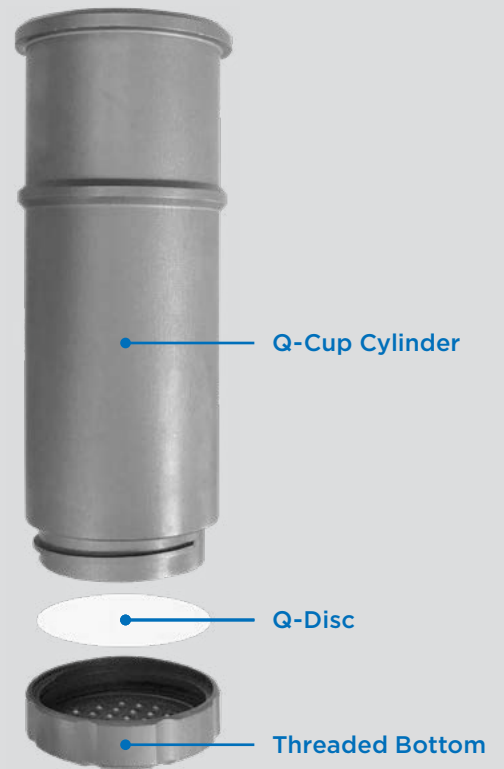
Q-Cup Sample Holder

A simple solution to a complicated problem.

The aluminum Q-Cup sample holder consists of three easy-to-assemble pieces:

- Q-Cup Cylinder
- Q-Disc®
- Threaded Bottom

The open top creates a dispersive effect, which promotes rapid extraction and filtration. The disposable Q-Discs filters your sample prior to analysis. The simple design lends itself to easy cleaning.



EDGE Rack

Load samples in seconds.

Once the samples are placed in the Q-Cups, the Q-Cups are loaded into the rack, along with the centrifuge tubes. Next, the rack is loaded into the EDGE. The samples are then ready for the automated extraction process.

“The advantage of the CEM EDGE PFAS system is that the extract is much clearer as it is filtered thus no clogging of SPE cartridges. Also with the CEM EDGE, no matrix effects are observed with different types of soil samples.”

Dharmendr Matabudul
Bureau Veritas — Canada



The patented Q-Cup technology offers simple and fast solvent extraction for a variety of sample types.



Environmental



Food



Packaging Materials



Biosolids



Consumer Products



Waterproof Materials

Clean

PFAS-free environment.

Polypropylene tubing, centrifuge tubes, and a side enclosure ensure that samples can be tested, free from outside PFAS contamination. Q-Cups and Q-Discs have been tested to be PFAS free. EDGE PFAS delivers results you can trust.



Compact

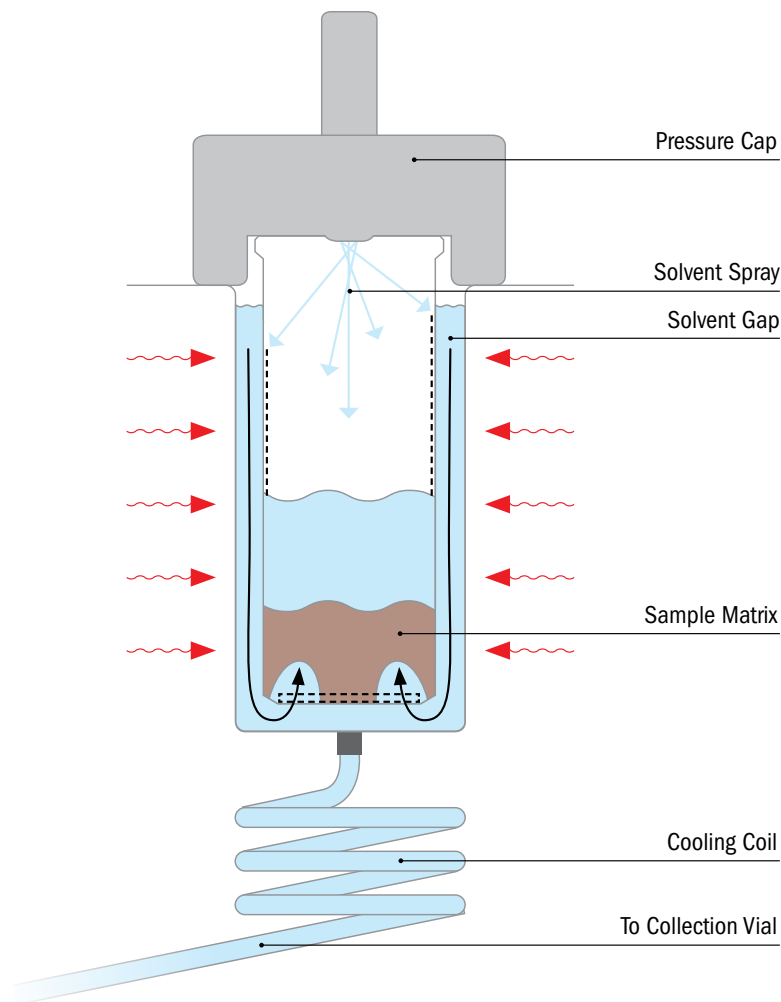
Its small size is a big advantage.

The EDGE PFAS is only 14.25" wide. That's about the width of an analytical balance. You can have multiple EDGE PFAS systems placed side-by-side on one bench top.

Press play and walk away.

Program up to 12 samples, using the integrated touchscreen and intuitive software, and EDGE PFAS takes care of the rest. Every sample is run using either a preprogrammed One Touch® method, or with your own custom method.





1 Select a Method

After a rack of Q-Cups containing samples are loaded into the EDGE, simply select the proper method, program the number of samples, and hit "Start".

2 Autosampler Loads Sample

The Q-Cup is automatically loaded into the chamber by the autosampler. The pressure cap then creates a pressurized seal on the top of the Q-Cup.

3 Matrix is Extracted

Solvent is added to the Q-Cup to wet the sample. As the chamber walls are heated, the pressure in the gap increases. This overcomes the pressure inside the Q-Cup, forcing the solvent to disperse into the sample.

4 Extract is Collected

Once the sample reaches temperature, the solvent is dispensed through the Q-Disc, the cooling coil, and into a collection vial.



EDGE Rack

Removable rack that holds 12 Q-Cup sample holders and 12 Centrifuge tubes.



Centrifuge Tubes

50 mL graduated polypropylene centrifuge tubes, capped. These tubes are compatible with the EDGE product line.



Q-Cup

The Q-Cup sample holder consists of 2 easy-to-assemble pieces for use in the EDGE. Thin-walled, aluminum design for optimum heat transfer and containment of up to 30 g of sample, or 40 mL of solvent.



Q-Disc

The Q-Discs are disposable filtration discs that provide final filtration of the extract, prior to analysis.



eCleanUP™

eCleanUP is tested to not contain PFAS and will aid in the removal of both water and impurities during the PFAS extraction process. Add it to each extraction mixture with the sample for best results.



You get more than an instrument.

When you own a CEM instrument, you have access to a whole team of scientists and engineers that are ready to support you. We are here to make sure you succeed.

Application Notes

Go to cem.com/pfas-extraction-applications to download EDGE application notes.

A screenshot of a web browser window. The address bar shows the URL cem.com/pfas-extraction-applications. The page content includes the identifier 'ap0209v3' in the top right corner. The main heading is 'Extraction of 40 PFAS Compounds from Soil and Tissue Following EPA Method 1633'. Below this is an 'Abstract' section. The abstract text is partially visible on the left side of the page.

ap0209v3

Extraction of 40 PFAS Compounds from Soil and Tissue Following EPA Method 1633

Abstract

Per- and polyfluoroalkyl substances (PFAS) are a class of manmade chemicals used in various industries due to their favorable properties for goods such as nonstick cookware and firefighting foam. Their stability and widespread use have contributed to their accumulation in the environment, and the lack of remediation techniques for their removal has allowed for their bioaccumulation in humans and animals. PFAS have been shown to cause health issues in humans, such as cancer, endocrine disruption, and infertility. Thus, monitoring

addition, extraction, and filtering of the extract. This allows for a rapid, efficient, and simple extraction of PFAS from these solid environmental samples.

In this work, the EDGE PFAS was utilized to effectively extract PFAS from soil and tissue samples with acceptable recoveries and RSD values. Animal tissues are difficult matrices to extract and add complexity to both the sample preparation and the analysis. With the EDGE PFAS system, one simple method



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United States Headquarters: +1 (704) 821-7015 | info@cem.com
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