



SCIENCE MAKES
A WORLD
OF DIFFERENCE

Environmental Testing Solutions

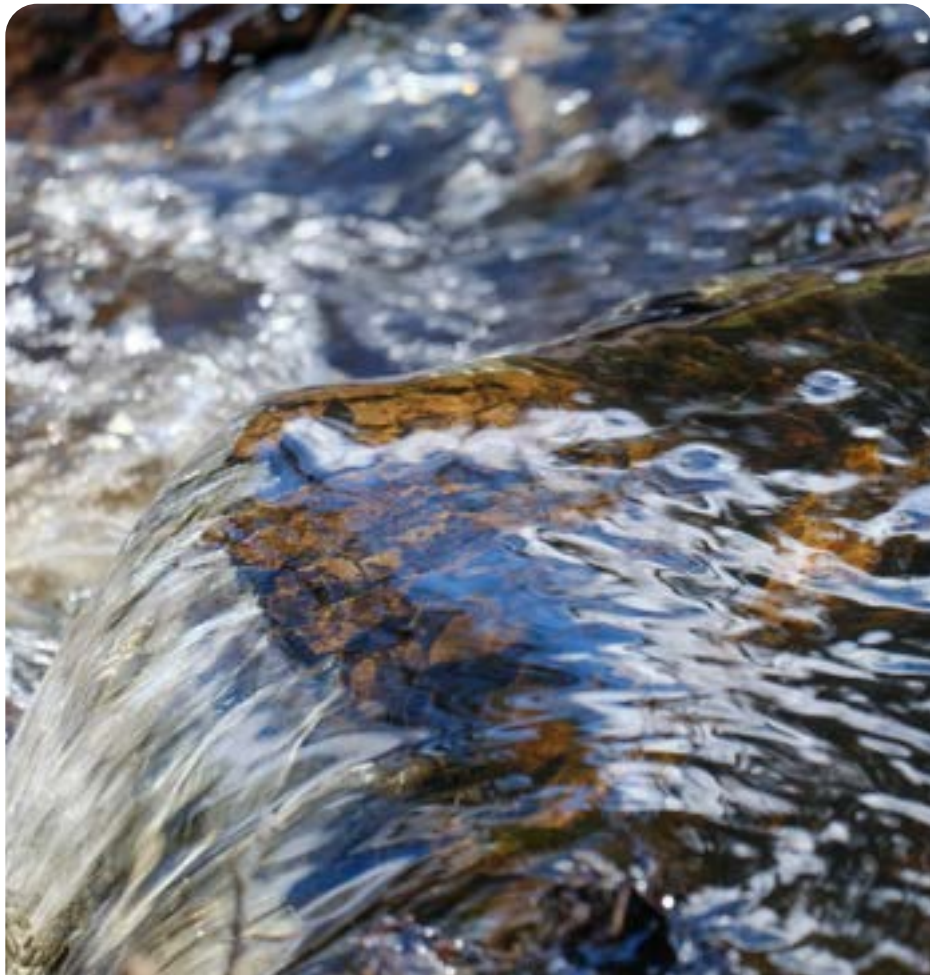
Better Testing Means More Productivity and Profit

The environmental analysis market is driven by change. Emerging contaminants, new methods, lower detection limits – these factors and more make it challenging to keep pace. At the same time, scientists performing environmental testing are dealing with increasing sample volumes and the need to deliver higher productivity with fewer resources.

We're committed to accelerating your environmental testing results, whatever your workflow looks like. We do it with turnkey solutions complete with analytical instrumentation, preset methods, workflows, and local-language capabilities, together with a robust consumables and accessories portfolio, informatics, service, and technical support – all coming together to help your lab meet new and evolving regulatory requirements.

Leadership in Water Testing

Our established workflow solutions save you time in method development and sample preparation and ensure your results are accurate and reliable. These easy-to-use, cost-effective solutions suit any workload – large numbers of routine samples, quick turnarounds and emergencies. These solutions help ensure your customers and stakeholders receive reliable and accurate analytical testing for surface water, groundwater, wastewater, and drinking water.



Key Applications

Toxics and trace metals, mercury, mineral content, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), oil and grease, carbamates, speciation, emerging contaminants of concern (PPCPs, PFAS, endocrine disrupting compounds, microplastics), cyanotoxins, radiochemistry.

Key Technologies

Sample preparation, automated liquid handling, AA, GC, GC/MS, headspace sampling, hyphenated techniques, ICP-MS, ICP-OES, Fluorescence Spectroscopy, FTIR, LC, LC/MS, liquid scintillation, purge and trap, UV/Vis, consumables.

State-of-the-Art Air Testing

Air pollutants, ozone precursors, semivolatile organics, trace metals, and particulate matter – these are the targeted analytes and pollutants our air monitoring, sampling, and detection options address. This comprehensive portfolio of solutions, including headspace, automated thermal desorption and gas chromatography, infrared, and atomic spectroscopy technologies delivers the building blocks environmental analysts need to help achieve fast, reliable, accurate results.



Key Applications

Pollutants, air particulate monitoring, ozone precursors, soil vapor intrusion (SVI), industrial hygiene, benzene, incident monitoring.

Key Technologies

Sample preparation, ATD-GC, gamma counters, GC, GC/MS, ICP-MS, liquid scintillation, informatics, consumables.

Reliable Soil and Solids Analysis

From everyday nutrient testing and soil health evaluations to complex contamination determination and monitoring at remediation sites, we have the soil analysis solutions for your areas of focus. Your lab will gain the ability to detect the smallest concentrations of regulated contaminants and pollutants of emerging concern. From trace metals testing to VOCs and SVOCs to in-field soils analysis, you'll get the job done reliably, efficiently, and in compliance.



Key Applications

Toxics and trace metals, hexavalent chromium, mercury, pesticides, herbicides, and PCBs, DRO/GRO, VOCs, SVOCs, oil and grease, carbamates, radiochemistry.

Key Technologies

Sample preparation, automated liquid handling, AA, GC, GC/MS, portable GC/MS, hyphenated techniques, ICP-MS, ICP-OES, FTIR, LC, LC/MS, liquid scintillation, thermal analysis, UV/Vis, informatics, consumables.

Elemental Analysis

Whether through industrial or waste disposal operations, the breaking down of soils, lead pipes, or acid rain, environmental analysis involves detecting arsenic, copper, chromium, nickel, silver, selenium, mercury, and other elements in various matrices, even at ultralow concentrations. It's critical for environmental scientists to have reliable methods and instruments that can achieve results in compliance with established regulatory methods and detection limits.



Application Highlights

Organics Analysis

When it comes to organic pollutants, we stay current with applications and guidance for routine and emerging contaminants in water, soil and air, delivering solutions for a broad range of volatile and semivolatile methods.

Drinking water comes primarily from surface and groundwater sources that are susceptible to pollution by VOCs and SVOCs. Due to these compounds' detrimental effects on human and environment health, there are strict limits for their presence in water, wastewater, soil, and other wastes. We provide the precise, reliable, high-throughput testing capabilities and ultratrace-level detection essential for ensuring that drinking water sources meet regulatory standards.



Application Highlights

Analysis of Contaminants of Emerging Concerns

Much of the focus of new environmental investigations and testing today is centered around contaminants of emerging concern. Often found or linked to everyday products, these compounds include microplastics, pharmaceutical and personal care products (PPCPs) and per- and polyfluoroalkyl substances (PFAS) which are highly stable in the environment and can bioaccumulate, thus impacting environmental and human health. The regulatory landscape for contaminants of emerging concern is dynamic, with advisory and maximum-contaminant levels being added at the state and federal levels and a move toward more stringent detection limits.

Application Highlights



Radiochemical Analysis

Radioactive particles are encountered at typically very low level in nature. Sources for naturally occurring radioactivity include minerals containing radioactive elements, background cosmic rays, solar flux, radon gas, radioactive materials in manufacturing, nuclear medicine, and industrial operations such as nuclear power plants, nuclear laboratories, and radioactive waste handling and disposal. Regulatory agencies have set concentration limits, standards, and analytical testing methods to detect radioactivity in environmental matrices. Entities that deal with radioactive substances, and some suppliers of potable water or wastewater treatment (where required by authorities), must perform radioactivity level determinations.

Application Highlights



Technology that Supports Your Science

Governments and laboratories around the world that perform environmental testing need to analyze increasingly complex samples under tighter regulatory requirements. So we've made it our mission to provide not only a comprehensive portfolio of instrumentation, software, and applications, but also consumables and accessories to support every variety of environmental testing method across every environmental matrix.



NexION® ICP-MS System

For testing labs conducting trace-elemental analyses, the NexION ICP-MS builds on a rich history of innovation, delivering accurate results to meet and exceed today's industry needs and regulatory requirements.



Avio® 560 Max ICP-OES

The Avio 560 Max system is a compact, fully simultaneous ICP-OES with a built-in HTS sample introduction module, taking 1.5-minute runs down to 30 seconds, ideal for commercial testing labs.



PinAAcle® 900T

For labs needing the best in both flame and THGA furnace atomic absorption, the PinAAcle 900T is a combined flame/longitudinal Zeeman-furnace system with the flexibility to switch between the two in seconds.



QSight® LC/MS/MS

The dial-source configuration of the QSight LC/MS/MS System enables labs to collect data in two complementary modes (ESI and APCI), maximizing the output from a single injection.



GC 2400™ Platform

Experience innovative GC workflows with the smart, simplified, and sustainable GC 2400 platform. Combined with SimplicityChrom CDS Software, it enables integrated workflow and new levels of usability.



Spectrum 3™ FTIR

The Spectrum 3 FTIR provides sampling flexibility and performance in mid, near and far infrared ranges through a single instrument allowing for quick, confident and cost effective analysis of a wide range of samples.

[See More](#)

Technology that Supports Your Science

Governments and laboratories around the world that perform environmental testing need to analyze increasingly complex samples under tighter regulatory requirements. So we've made it our mission to provide not only a comprehensive portfolio of instrumentation, software, and applications, but also consumables and accessories to support every variety of environmental testing method across every environmental matrix.



Quantulus™ GCT

Our liquid scintillation counter delivers ultralow-level sensitivity in a smaller benchtop footprint – perfect for detection of low level Alpha and Beta radioactivity.



Spotlight™ 400 FTIR

The system incorporates ATR imaging technology that enables the collection of high resolution infrared images of extremely small samples to visualize materials composition.



LC 300 HPLC/UHPLC

With fully customizable detectors and accessories, each LC 300 HPLC and UHPLC System is intuitive and designed to meet high-throughput lab requirements, with no additional burden on lab staff.



MPS 320 Microwave Digestion System

The MPS 320 is an exceptionally reliable, easy-to-use and safe microwave digestion system that accommodates a wide range of sample matrices and applications.



Consumables

Your partnership with PerkinElmer doesn't stop when you purchase an instrument. We have a complete line of consumables and accessories for atomic spectroscopy, chromatography, molecular spectroscopy and thermal analysis.

Technology that Supports Your Science

Applications by Technology

| Technology | Trace Elements / Metals | Pesticides and Residues | VOCs and SVOCs | Hydrocarbons | Radiation / Radioactivity | Emerging Contaminants |
|---------------------------|-------------------------|-------------------------|----------------|--------------|---------------------------|-----------------------|
| Sample Preparation | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Automated Liquid Handling | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| AA | ✓ | | | | | |
| GC | | ✓ | ✓ | ✓ | | ✓ |
| GC/MS | | ✓ | ✓ | ✓ | | ✓ |
| ICP-OES | ✓ | | | | | |
| ICP-MS | ✓ | | | | ✓ | ✓ |
| FTIR | | | ✓ | | | ✓ |
| LC | | ✓ | | | | ✓ |
| HPLC/ICP-MS | ✓ | | | | | |
| LC/MS | | ✓ | | | | ✓ |
| Liquid Scintillation | | | | | ✓ | |
| UV/Vis | ✓ | | ✓ | ✓ | | |
| Consumables | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Technology that Supports Your Science

Applications by Matrix

| Matrix | Analyte Group | Technique |
|--------------|-------------------------------|-----------|
| Air | Ambient (Outdoor) / Volatiles | GC/MS |
| | | ICP-MS |
| Soil | Explosives | LC |
| | Mercury | ICP-OES |
| | Metals | ICP-MS |
| | Nutrients | ICP-OES |
| | Volatiles / Semi-Volatiles | GC/MS |
| | MTBE | GC-FID |
| Water | Aldehydes / Ketones | LC |
| | POPs | LC/MS/MS |
| | Metals | ICP-MS |
| | Disinfection By-Products | GC/MS |
| | Volatiles | GC/MS |
| | Endocrine Disruptors | LC/MS/MS |
| | PPCPs | LC/MS/MS |
| | Explosives | LC/MS/MS |
| | Herbicides / Pesticides | LC/MS/MS |
| | Nanoparticles | ICP-MS |
| | Perchlorate | LC/MS/MS |
| | Petroleum Hydrocarbons | GC-FID |
| | Phthalates | GC/MS |
| | Semi-Volatiles / Volatiles | GC/MS |

Environmental Resources

Explore our brochures to learn more about our environmental testing capabilities and offerings – from soil to water to air.



[Drinking Water Analysis Brochure](#)



[Soil Testing Solutions Brochure](#)



[Outdoor Air Monitoring Solutions Brochure](#)



[Microplastics Analysis Brochure](#)



[PFAS Analysis Brochure](#)



[Drinking Water Analysis Webinar Series](#)

Supporting the Business of Science

OneSource Laboratory Services has built a complete suite of solutions that provide the knowledge, applications, services and human power today's labs need, including uptime optimization, lab analytics and workflow solutions. Digital innovations give you access to real time reports that help you make informed decisions about your lab. And compliance issues are avoided with guidance from experts who have worked with companies like yours.

OneSource Services will ensure that your lab runs at maximum efficiency, returning time to your scientists to do what they do best.

OneSource Laboratory Services include:

- Asset Optimization
- Education and Training
- Multivendor Service
- Asset Location Services
- Asset Fleet Management
- Asset Utilization Analytics & Optimization
- Compliance Services
- Lab Information Systems Support
- Scientific Support
- Lab Relocation





For more information on our environmental solutions, visit
www.perkinelmer.com/category/environmental

PerkinElmer U.S. LLC
710 Bridgeport Ave.
Shelton, CT 06484-4794 USA
(+1) 855-726-9377
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

Copyright ©2023 PerkinElmer U.S. LLC. All rights reserved. PerkinElmer® is a registered trademark of PerkinElmer U.S. LLC. All other trademarks are the property of their respective owners.

9359 (159341)