ICP INDUSTRY NEWS | GLASS EXPANSION | OCTOBER 2026 | VOLUME 4

Fall Seminars, Fresh Research, and Tools That Keep Your ICP Running Clean

Welcome to Our Fall Edition

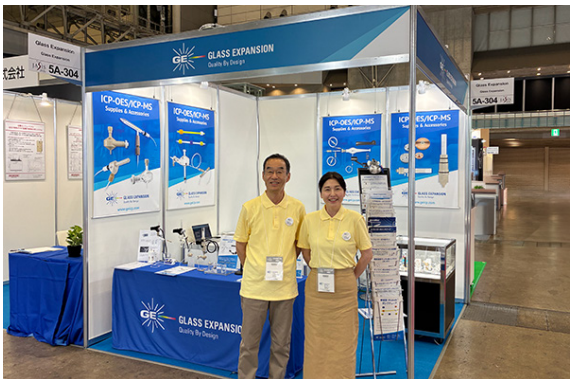
Fall is when many labs start planning for the year ahead, and this issue is built to help. Inside, you'll find on-demand webinar resources, a new coolant analysis application note, two research projects featuring Glass Expansion products, one of which was published in Analytical Chemistry, and our new Guardian Probe resource guide. We also have a great lineup of in-person Fall seminars; one of those city stops may be closer than you think.

Recent Highlights

JASIS 2026: Chiba, Japan

In September, our Asia-Pacific team returned to JASIS at Makuhari Messe (September 2 to 4). The show welcomed more than 20,000 visitors and 446 exhibitors under this year's theme, "Analysis, Measurement, Observation: Technologies for Our Future."

Visitors to our booth got a first look at two new releases: the **Tracey™ BC Spray Chamber** and the **E-Torch™**. Thank you to everyone who stopped by to talk shop. We're already looking forward to JASIS 2027.



Webinar Series: Mastering Trace Metals Analysis

"Understanding the Factors That Limit ICP Performance"

When precision slips, or signals drift, the cause often lives in the sample introduction system rather than the instrument itself. As part of a three-part webinar series with CEM GmbH and Inorganic Ventures, Dr. Maja Budanovic, ICP Product Manager at Glass Expansion GmbH, walked through each stage where performance is won or lost: sample delivery, aerosol generation, transport, and the plasma interface.

Maja showed how component design shapes signal stability, precision, and analytical robustness, and shared practical fixes for the sample introduction challenges analysts run into most often.



Key insights for: Analysts troubleshooting drift or poor precision, and anyone optimizing an ICP-OES or ICP-MS method for trace-level work.

Watch the Recordings and Download the Slides →

The Power of Partnership: Key Collaborations

New Application Note: Faster, Automated Coolant Analysis (ASTM D6130)

Coolant samples look simple but rarely behave that way. High glycol content, viscosity, and dissolved solids can slow throughput, extend washout, and wear down components. Building on our June webinar with Teledyne LABS and Inorganic Ventures, this new application note documents a complete workflow, from automated sample preparation through rapid ICP-OES analysis.

"Automated Preparation and Rapid Analysis of Coolant Samples by Inductively Coupled Plasma Optical Emission Spectroscopy"

The method pairs four Glass Expansion components, each chosen to solve a specific coolant challenge:

- **SeaSpray™ Nebulizer:** Handles demanding matrices without clogging, so runs stay stable from the first sample to the last.
- **Tracey™ BC Spray Chamber:** Designed for fast, efficient washout, which means shorter rinse times and more samples per shift.
- **E-Torch™ with Ceramic Plasma Tube:** Built to extend maintenance intervals and reduce torch replacement costs.
- **Guardian™ Autosampler Probe:** Prevents blockages and cross-contamination before the sample ever reaches the nebulizer.

Read the Full Application Note →

On-Demand Webinar: How the Experts Tackle Used Oil Analysis (ASTM D5185)

Oil matrices are hard on sample introduction systems. Carryover lingers, rinses stretch out, and throughput suffers. In this session, experts from Glass Expansion, Teledyne LABS, and Inorganic Ventures share practical, proven ways to reduce carryover, improve rinse efficiency, and increase throughput without sacrificing accuracy in ICP-OES used oil analysis (ASTM D5185).

An application note summarizing this work is coming soon. Subscribers will be the first to receive it.

Download the Glass Expansion Slide Deck →

Research Spotlight: Reading Wildfires Through Their Light

Houston Miller Research Group, George Washington University

Characterizing Potassium Radiative Emissions from Flames Using Laser Heterodyne Radiometry

Some of the most interesting applications of our products happen far outside the traditional ICP lab. At George Washington University, the Miller Research Group is developing a new way to assess wildfires from a distance. At the heart of their experimental setup is a Glass Expansion **SeaSpray™ nebulizer** and **Twister™ spray chamber.**

Research summary from graduate student, Erin McCaughey:

Wildfires release a complex mix of gases, particles, and atomic species that carry valuable clues about fire intensity and combustion conditions. Potassium is an especially useful tracer of burning biomass. Our work explores Laser Heterodyne Radiometry (LHR) as a compact, spectrally selective technique for detecting and characterizing potassium's radiative emissions.

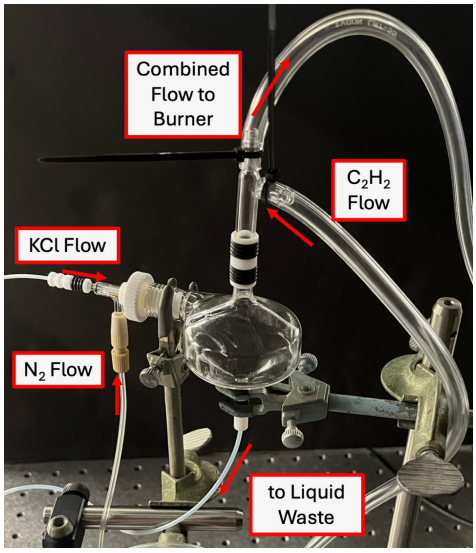
To develop and validate the approach, we study potassium emission from a well-characterized laboratory flame. The SeaSpray nebulizer and Twister spray chamber introduce a controlled, potassium-containing aerosol into the flame. This gives us a repeatable way to add potassium to the combustion environment and to vary the amount systematically.

We measure the resulting emission near 770 nm with an LHR-based sensor, while complementary absorption and emission spectroscopy characterize ground-state and excited-state potassium within the flame. Combined with existing flame-structure measurements and chemical modeling, this lets us connect potassium concentration and flame conditions to radiative emission.

Ultimately, this laboratory system will provide a foundation for evaluating LHR as a passive, remote diagnostic for biomass fires. Selectively measuring potassium emission could reveal combustion conditions and fire temperature, information that is key for real-time wildfire monitoring.

Why it matters: Whether you're feeding a plasma or a research flame, reliable results depend on delivering a consistent, controllable aerosol. That's exactly what this setup was built to do.

Stay tuned for more from the *Miller Research Group.*

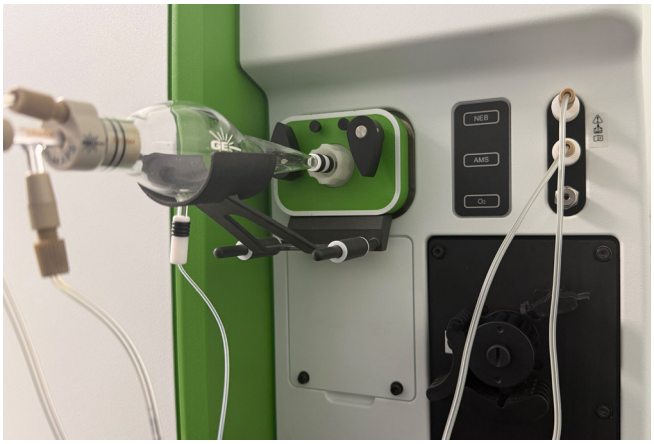


Published Research: Detecting Microplastics Directly with Single-Event ICP-MS

Direct Characterization of Halogen-Based Microplastics via Single-Event ICP-Mass Spectrometry in Negative-Ion Mode

Microplastics are one of analytical chemistry's fastest-moving challenges, and most current methods detect them indirectly. A July 2026 paper in Analytical Chemistry (Volume 98, Issue 31) by Antonio Bazo et al. demonstrates a more direct route: negative-ion-mode single-event ICP-MS for fluorine- and chlorine-selective detection and sizing of individual microplastic particles. This expands particle-resolved analysis beyond indirect fluorine detection and carbon-based approaches.

The study was performed at the University of Graz in collaboration with the University of Zaragoza and PerkinElmer Scientific Canada. All measurements were carried out using Glass Expansion's High Efficiency Sample Introduction System (HE-SIS).

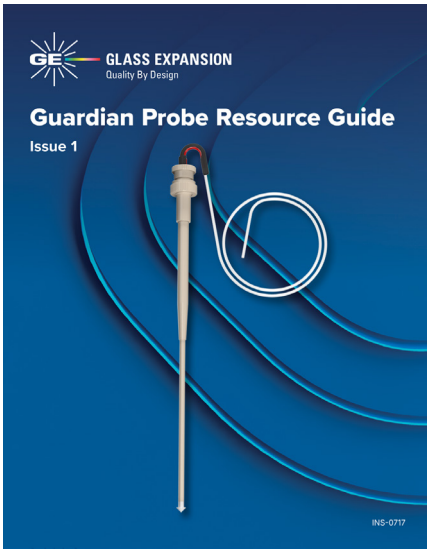


About HE-SIS: Originally developed for single-cell analysis, HE-SIS has been refined with input from our R&D team, research institutions, and instrument manufacturers to support single-cell, single-particle, nanoparticle, and low-volume work. With transport efficiencies up to 95%, nearly all of your sample reaches the plasma, so fewer particles and events go uncounted.

Read the Paper in Analytical Chemistry →

Product Spotlights

Guardian™ Autosampler Probe: New Resource Guide



If your lab runs an autosampler, the probe is the first thing every sample touches. When it blocks or carries over, everything downstream pays for it through reruns, drift, and lost time. The Guardian Autosampler Probe combines a robust tip with a built-in filter to stop blockages before they reach your nebulizer and capillary tubing, protecting your results from the very first draw.

Our new Guardian Resource Guide puts everything you need in one place.

Inside, you'll learn how to:

- **Order right the first time.** The guide is organized by autosampler brand, so you know exactly which model fits your system.
- **Fix problems fast.** It covers installation, performance, and common issues, with clear corrective actions for each.
- **Make your probe last longer.** It walks through proper care and maintenance, step by step.

Download Your Free Copy →

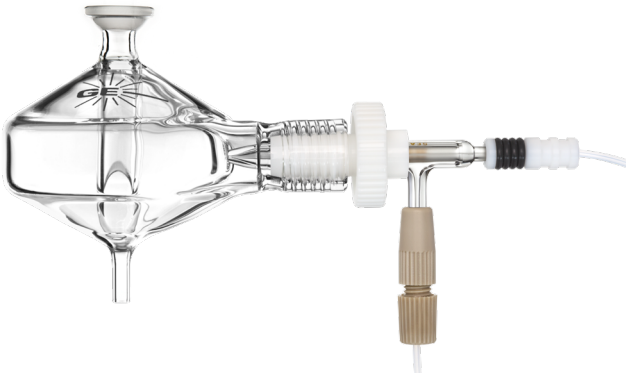
Prefer a printed copy? Request one, and we'll mail it to you at no charge.

Helix CT™ Spray Chamber: The Original ConstantTorque™ Nebulizer Connection

Trusted in labs worldwide since 2018

Say goodbye to O-ring headaches. If you've used O-ring nebulizer seals, you know the trade-offs:

- Short lifetime and poor resistance to strong acids and organic solvents
- O-rings bonding to the nebulizer, leading to breakage
- Contamination risk from dead volume
- Difficult, tool-required replacement



Helix CT replaces the O-ring with a precisely controlled torque mechanism and a positive stop that seats your nebulizer at the same depth every time. The result is day-to-day reproducibility you can count on.

Why torque control matters:

- **It protects your nebulizer.** Controlled torque prevents over-tightening damage.
- **It keeps your data consistent.** Exact, repeatable positioning delivers optimal performance run after run.
- **It keeps your lab safer.** Fewer broken nebulizers means less broken glass to handle.

Backed by 40 years of Glass Expansion sample introduction engineering, Helix CT remains the standard many labs rely on.

Ready to upgrade? **Download the Helix CT Flyer →** or contact your regional Glass Expansion office for a quote.

Upcoming In-Person Events

CEM Fall Seminar Series: "From Digestion to Data"

Better trace metals data starts long before the sample reaches your instrument. These free, full-day educational seminars follow the entire workflow, and Glass Expansion is proud to return as a presenter alongside CEM, Agilent Technologies, GFS Chemicals, and Inorganic Ventures.

What you'll take home: You'll learn how to select the right acids and standards, optimize your digestion process, match your sample introduction system to your analyzer, and generate clean, reliable data. Whether your samples are routine or highly complex, and whether you run one a day or hundreds, you'll leave with practical techniques shaped by decades of hands-on lab work and customer support.

No cost to attend. Breakfast and lunch are provided.

Date	Location
October 6	St. Louis, MO
October 8	Memphis, TN
October 20	Greenville, SC
November 3	Bloomington, MN
November 10	Madison, WI
November 11	Lisle, IL

Seats are limited, so reserve yours early.

Register on Our Events Page →

Thermo Fisher Scientific Analytical Solutions Forum

Glass Expansion is also joining Thermo Fisher Scientific's Analytical Solutions Forum tour this fall. This practical, education-led seminar helps industrial and environmental laboratories get reliable results, streamline their processes, and reduce reruns. Expect application-focused discussions, best practices, troubleshooting, and hands-on discovery, plus a Technology Showcase featuring several vendor partners.

Date	Location
September 29	Houston, TX
October 27	King of Prussia, PA
October 29	Mississauga, ON

Register on Our Events Page →

Thank You for Reading

We're grateful for your partnership and committed to giving you the tools, knowledge, and support you need for exceptional results every day. Visit our website for the latest products, the full Plasma Pro Tips archive, and our up-to-date event calendar.

Have a question about your application? Your regional Glass Expansion representative is happy to help with product recommendations, technical support, or standardization opportunities. We'd love to hear from you.

We look forward to seeing many of you on the fall seminar tours. Here's to cleaner data, smoother workflows, and results you can stand behind.

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