

Gas chromatography

Eurofins South Bend Indiana Lab standardizes on TRACE 1600 Series Gas Chromatograph (GC) Systems for water analysis

Eurofins Eaton Analytical, LLC—South Bend, IN

“I absolutely recommend the TRACE 1600 Series Gas Chromatograph systems. The software is very user friendly, and when they are combined with Thermo Scientific™ mass spectrometry instruments, our challenging sensitivity needs are met. Additionally, technical support is available to us from Thermo Scientific almost instantaneously.”

—Rhonda Day, Technical Manager,
Eurofins Eaton Analytical, LLC

GC-based systems for the analyses of hundreds of water samples

To support clients' public health protection efforts, Eurofins Eaton Analytical, LLC is focused on the analysis of water for a full range of contaminants per United States Environmental Protection Agency (U.S. EPA), US Food and Drug Administration (FDA), and other standard methods. At the Eurofins Eaton Analytical South Bend, Indiana, Organics Testing Laboratories, gas chromatography/electron capture detection (GC-ECD), GC-mass spectrometry (GC-MS), and GC-tandem MS (GC-MS/MS) techniques are essential to the identification and quantification of volatile organic compounds (VOCs), pesticides, and synthetic organic compounds (SOCs) in municipal drinking water per the U.S. EPA's 500 series of methods. To meet client demands for water analyses, the laboratory overseen by Rhonda Day, Technical Manager, Eurofins Eaton Analytical, LLC, typically extracts and analyzes several hundreds of water samples every day using approximately 35 GC-based instrument systems configured with autosamplers. Efficiently performing these analyses requires reliable and sensitive instrument systems and world-class service and support.

“Downtime is much less with the new instruments, due to their enhanced robustness and great service and support when needed. When we call for service, we get very quick feedback. Compared to our older GCs, instrument downtime is 20% of what it used to be.”

—Rhonda Day

To enhance their analyses of VOCs and SOCs in waters, the laboratory is updating the majority of their GC-based instruments to Thermo Scientific™ TRACE™ 1600 Series GC systems. By offering extended uptime, excellent support services, and ease of use, TRACE 1600 Series GC systems are augmenting the power and performance of the laboratory's hyphenated systems.

TRACE 1600 Series GC systems replace obsolete instruments, increasing uptime

Whether used in hyphenated or standalone configurations, GC instruments are key in achieving the sample throughput necessary to respond to the needs of Eurofins Eaton Analytical clients. According to Day, “We need to have reliable equipment with little downtime so we can process as many samples as possible as quickly as we can.” Reliable GC systems, as well as rapid service response when problems occur, are essential to minimizing downtime that would interfere with sample analyses, creating sample backlogs.

The need for supportable GC instruments was among the reasons the laboratory decided to replace their obsolete GCs with TRACE 1600 Series GC systems. A Thermo Scientific GC system is always ready to run, and the TRACE 1600 Series GC system is designed to maximize operational efficiency and profitability. “The GCs we had were out of date and unsupported, so we could no longer purchase parts for them. We had a graveyard of old instruments that we would pirate parts off of to try and keep them running. The other concern was that the GCs did not support Microsoft® Windows® 10, which we needed for IT security,” explained Day. As a result of the new equipment, along with renowned Thermo Scientific service and support, the laboratory's GC uptime has measurably increased.



Fast response from Thermo Scientific support staff rapidly resolves problems

Instrument downtime can impact contract testing laboratory revenues and damage reputation for fast sample turnaround. Like any other contract testing laboratory, Eurofins Eaton Analytical expects quick response to requests for service. Thermo Scientific GC and GC-MS instruments are designed for easier and faster servicing. These innovative instrument designs, along with substantial technical expertise, enable Thermo Scientific service and support staff to consistently meet and even exceed expectations for service response. Said Day, “We have great service and support. I appreciate having direct contact with the people who can answer our technical questions, without having to go through a phone tree. We have a great relationship with our service engineer who helps us with preventative maintenance, and we can get parts immediately, so our downtime is much less.”

Additionally, a tailored approach to customer support offers an opportunity to further enhance productivity, enabling laboratories to keep pace with demands for increased throughput and on-time results. That's the reason behind Thermo Scientific™ Premier Plus service, a service plan tailored to specific laboratory needs. “Because we beta tested the Premier Plus service plan, we were among the first to get this highest level of personalized treatment, and it has made a difference in our operations,” noted Day.

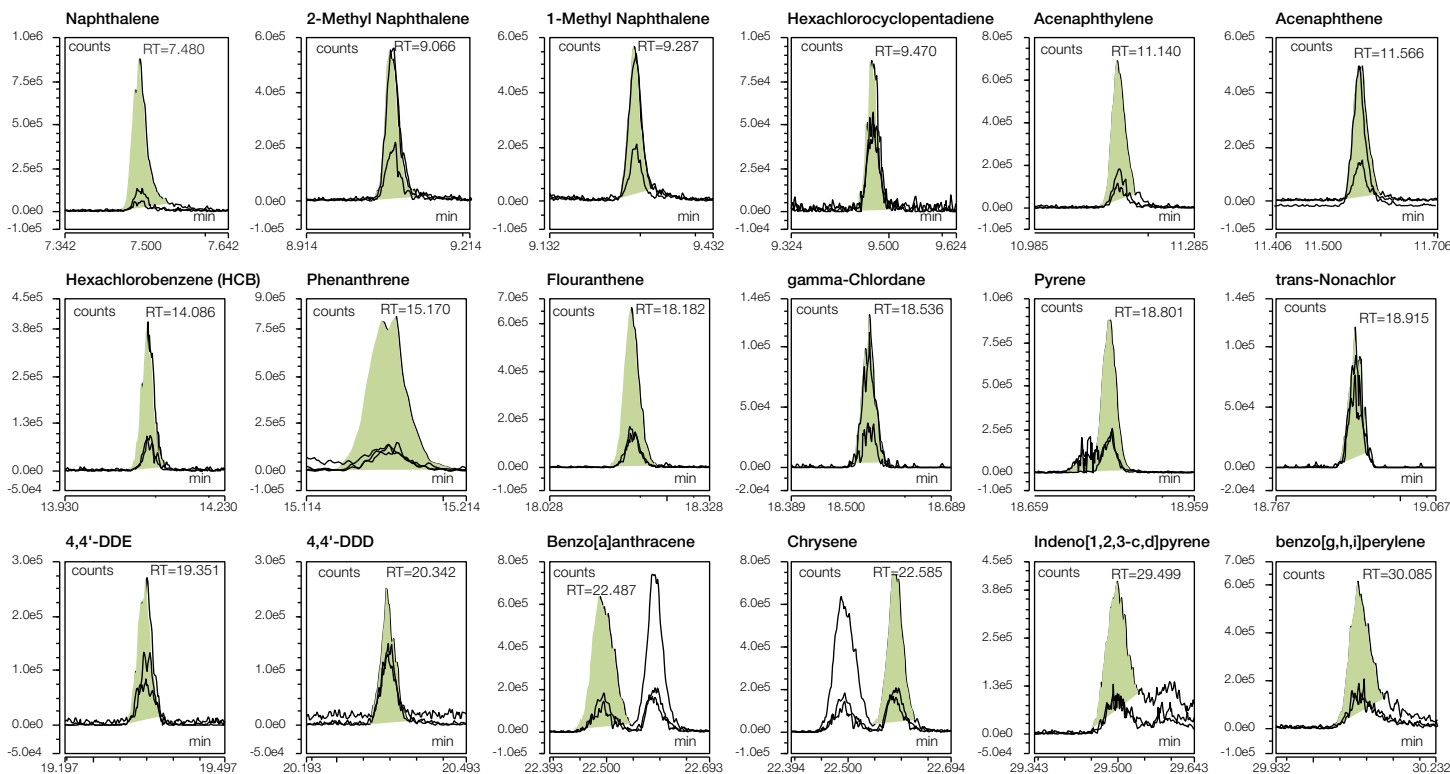
“Other GC-MS systems could not meet the sensitivity requirements of U.S. EPA Method 525.2. Thermo Scientific helped us reach our desired sensitivity by developing methods for us, so we didn’t have to spend precious time doing development. After that, we decided to change all the GCs to TRACE 1600 Series GC systems in our labs.”

—Rhonda Day

GC-MS performance ensures method requirements are met

Certain U.S. EPA methods, such as U.S. EPA Method 525.2, require instrument systems able to achieve low detection limits. Day explained, “the detection limits that we are required to obtain are very low and getting lower all the time. We need instruments that can meet the sensitivity requirements of our clients. We made the choice to go with Thermo Fisher Scientific after a competitive comparison that proved the Thermo Scientific instruments could do what we needed, for U.S. EPA Method 525.2 in particular, to reach our required sensitivity levels. Thermo Scientific support staff helped the laboratory to reach the sensitivity required and saved valuable time by providing pre-developed methods.”

After the demonstration, the laboratory ordered 17 instruments to replace their obsolete GCs. Describing the deployment of the TRACE 1600 Series GC systems, Day noted, “it’s very intuitive to use compared to what we had used before. We use Thermo Scientific™ Chromeleon™ [Chromatography Data System (CDS)] software which is very user friendly and super powerful.” By the end of 2022, the laboratory expects that there will be less than a handful of their systems that are not configured with TRACE 1610 Series GCs.



Quan/Qual ions for selected compounds at 0.05 µg/L analyzed according to U.S. EPA Method 525.2

Conclusion

For laboratories needing to update their GC-based systems to a reliable, modern solution, the TRACE 1600 Series GC systems deliver increased uptime along with renowned support services, while augmenting the efficiency and performance of Thermo Scientific hyphenated systems. In particular, for environmental-testing laboratories facing considerable sample workloads and looking for enhanced robustness, uptime, and sensitivity to meet demanding regulations, Thermo Fisher Scientific is the ideal partner to help stay ahead.

About Rhonda Day



Rhonda Day, Technical Manager for the Organics Laboratories at the South Bend site of Eurofins Eaton Analytical, LLC, has a Bachelor of Science degree in chemistry. She joined the laboratory in 1990 and has spent the majority of her time in the Organics department. She has held her current position since 2014.



South Bend Indiana site of Eurofins Eaton Analytical, LLC

About Eurofins Eaton Analytical, LLC

Eurofins Eaton Analytical, LLC (EEA), founded in 1969, is an analytical laboratory focused on the analysis of water (raw, municipal, bottled, saline, or reuse) for a full range of chemical, microbial, and radiological contaminants. It is the largest potable water testing laboratory in the U.S., with over 100,000 combined square feet of laboratory space and nearly 200 qualified staff at its East and West coast laboratories and Service Centers. EEA recognizes water quality to be critical to public health protection, whether in water supplies or as a component of food and beverages.

Using methods from EPA, FDA, and in-house techniques, EEA provides clients with high quality, low-reporting-limit data for water quality assessment. EEA also assists clients with quality assurance consulting and development of internal water quality standards. EEA stays on the leading edge of both compliance and emerging contaminant analyses by partnering with U.S. EPA and instrument manufacturers on method development and validation projects. EEA is accredited under the National Environmental Accreditation Program and ISO 17025 in multiple states and holds drinking water certification in all 50 U.S. states and territories.

Learn more at thermofisher.com/trace1600