LECO® The Analyzer Separation Science
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In This Issue

The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them.

William Bragg Sr.

See the Latest Advances in Separation Science

Demonstrations and Training Begin at Fort Myers Facility

LECO's new Fort Myers, Florida facility features training classes and demonstrations for those interested in learning more about chromatography and mass spectrometry.

If you have ever wanted the opportunity to see the latest chromatography and mass spectrometry instrumentation in action, now is your chance.

LECO's brand-new Fort Myers, Florida facility has been exclusively designed to provide hands-on demonstrations to those who are interested in learning more about chromatography instrumentation. Fort Myers also provides training classes aimed at teaching new customers how to get the most out of their instruments.

The facility features a large training room with a classroom-style laboratory. Currently, demonstrations and classes are being offered for the Pegasus® GC-TOFMS and GCxGC-TOFMS gas chromatography instruments. Demonstrations and training classes will soon be available for the Unique® LC-TOFMS and the new GCxGC-FID/ECD as well.

The objective of these demonstrations is to show how Time-of-Flight Mass Spectrometry (TOFMS), when combined with ChromaTOF® software, provides an unparalleled increase in laboratory productivity.

The classroom-style laboratory holds numerous classes and demonstrations featuring the latest Separation Science developments.

Demonstrations are based on sample analysis—participants are able to send samples in advance for analysis, and review the results at the demonstration. By getting a first-hand look at how the equipment operates, participants have a better idea of how the instruments are best suited to their needs.

"We hope to show how these instruments can really get a person doing so much more than what they think," said Don Hilton, instructor and demonstrator at the facility. "Our demonstrations are aimed at showing how various applications can truly benefit from the features on these machines."

In addition to sample analysis, the advantages of ChromaTOF software are highlighted as well, including how increased speed, higher resolution, and intricate mass accuracy deliver more precise information from the most challenging chromatographic analyses. Participants are able to view how the software's sophistication enables and enhances its ability to be user-friendly.

The training classes also offer the opportunity to learn the basics of operating the Pegasus, care and maintenance of the instrument, and some of the features and advantages that make the Pegasus a truly unique instrument.

Hilton adds that technology has enabled the industry to do things much easier and faster than in the past.

"Participants in our demonstrations and classes are learning how the technical capabilities of the Pegasus provide more efficient results that are targeted for their needs."

The staff at the Fort Myers facility is open to suggestions for demonstrations and training that are currently not offered at the facility. If you are interested in attending a demonstration, participating in a training class, or learning more about the opportunities available, please contact our Separation Science department by calling 269-985-5730, or visit www.leco.com. ■

New Product Information

GCxGC-FID/ECD

New to the LECO Corporation line of Separation Science instruments are the GCxGC-FID and GCxGC-ECD, used for conducting two-dimensional gas chromatography on complex mixtures. GCxGC multiplies the resolving power of a single gas chromatograph by that of another, resulting in an order of magnitude increase in the number of chemical compounds that can be separated in a given amount of time. With GCxGC, hundreds-to-thousands more compounds can be detected than with conventional GC. LECO's easy-to-use ChromaTOF®-software simplifies component identification for an increase in efficiency and productivity. ■

Who's Who in Sep Sci

Meet Tincuta Veriotti

When Tincuta Veriotti came to America from Romania with her husband, she wasn't looking for a career in gas chromatography.

"We came over here because we wanted to try something new," she says with a laugh. "We were looking for adventure."

Once in America, Veriotti, who had obtained a Master's degree while in Romania, began working at an environmental lab in Grand Rapids, doing GC and HPLC analysis. Interested in learning more about gas chromatography, she enrolled in the University of Michigan, studying under Dr. Richard Sacks. She received her Ph.D. in Chemistry, with an emphasis on Gas Chromatography, in July of 2002. In August of that same year she began working as an Applications Specialist for LECO Corporation.

Today she keeps busy analyzing samples for clients, giving demonstrations, writing Application Notes, and participating at conferences, all utilizing LECO's Pegasus® III GC-TOFMS, Pegasus 4D GCxGC-TOFMS and GCxGC-FID/ECD instruments.

Veriotti loves the work she does in the LECO Separation Science Lab. She finds the work challenging and interesting.

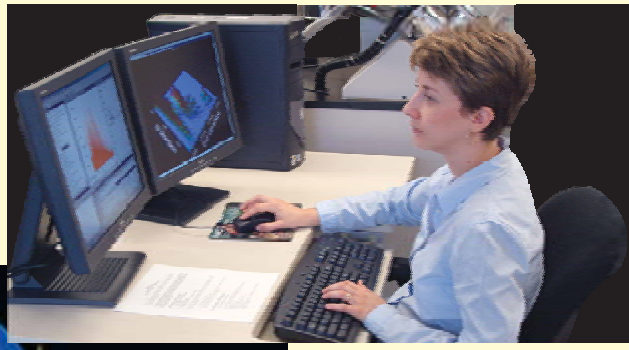
"I get to analyze a variety of different samples for different fields, so I'm always learning something new," she said. Veriotti also enjoys interacting with the customers, clients, and associates in her field through demonstrations and at conferences. She also gets to learn more about gas chromatography.

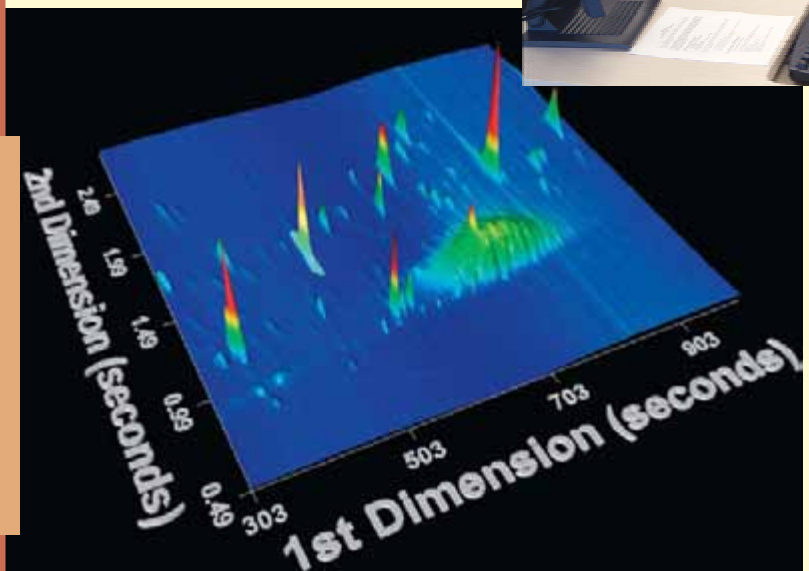
"I have always enjoyed working for LECO because our products are always on the cutting edge of technology," Veriotti said. "They are constantly working to introduce new ideas and improve their current instruments."

Veriotti pointed out that when she first started school, leaders in the field didn't expect things to go much further than traditional GC.

"The GC technique is evolving quite rapidly, and is going so many places when many thought it couldn't get any better," she said. "I'm excited to see the GC technology LECO develops in the future." ■

LECO Applications Specialist Tincuta Veriotti analyzes a variety of samples every day using the latest gas chromatography technology.





What emotional disorder does a gas chomatograph suffer from?

Separation anxiety!

LECO Laboratories—On the Move

Interior shot of the LECO Separation Science Mobile Laboratory.

Ever wish you could step out the back door, and have your very own analytical lab right at your doorstep? Or maybe you and your colleagues are interested in a demonstration of new mass spectrometry technology, but don't have the financial resources, or time, to travel a long distance to the analytical lab you would really like to see. LECO can solve all of your problems with our mobile laboratory—we bring the lab to you!

Traveling throughout North America, LECO Corporation's 45-by-8-foot mobile laboratories bring the latest analytical instrumentation right to your area. Those who visit the mobile laboratory have the opportunity to see the latest LECO instrumentation in action.

In addition, LECO representatives are on-site to discuss everything from methods to maintenance first-hand. An "auditorium" in the back of the bus provides LECO sales engineers the opportunity to present information you are looking for on LECO Corporation and its products.

Standard demonstrations are provided, consisting of a brief overview of the LECO Separation Science instruments, followed by a demonstration of the Pegasus® GC-TOFMS and ChromaTOF® software. If you have ever wanted to see the benefits of Time-of-Flight technology in action, our mobile laboratory is a great opportunity! Contact LECO at 1-800-292-6141, or 269-985-5496, for more information on when LECO mobile laboratories will be in your area. LECO also has mobile laboratories available for our organic, metallography, and inorganic product lines. ■

Application Information

Applications CD-ROM Includes the Newest Applications for LECO Separation Science Instruments

LECO offers free applications CD-ROMs to customers interested in the latest developments with our Time-of-Flight Mass Spectrometers. Applications developed by LECO scientists are detailed with experimental conditions and method parameters for our Pegasus 4D GCxGC-TOFMS, Pegasus III GC-TOFMS, GCxGC-FID/ECD, and Unique LC-TOFMS. Over 70 application notes cover the following topics:

- Essential Oil Analysis
- Environmental Analysis
- Petroleum Analysis
- Food and Beverage Analysis
- Fragrance Analysis
- Pesticide Analysis

Application Highlight • Organochlorine Pesticides

Though the use of organochlorine pesticides (OCPs) has been banned or under restricted guidelines for several years, trace amounts of these chemicals can still be detected in some fruits and vegetables.

These pesticides are at extremely low levels; therefore the standard method of determination is gas chromatography, using an electron capture detector (GC-ECD). However, complications with this process may arise due to the complex nature of the food matrix, causing interferences to arise and confound the accuracy of results. In contrast, comprehensive two-dimensional GC (GCxGC) decreases the chances for interference by performing two independent separations on a sample in a single analysis using one detector—dramatically increasing peak capacity.

Recently, LECO Application Scientists performed a comparison of these two techniques and their effectiveness among the analysis of pesticides. Cucumber and tomato samples were obtained from a local grocery store, and their extracts were prepared using the Florida Modified-CDFA Multi-Residue Method. The analysis found that the increased peak capacity of GCxGC could decrease the potential for coelutions, both for pesticides coeluting with each other, and for pesticides coeluting with matrix components in extracts. The sensitivity enhancement afforded by GCxGC-ECD allows better detection limits, which remain important as OCP levels continue to decrease in food. ■

More information on this analysis can be obtained by requesting a copy of LECO's Applications CD-ROM pictured at the left.

Tradeshow News

2005 will be quite active for LECO on the tradeshow circuit, as we continue to display our newest products and services at notable conferences and exhibitions. Upcoming shows include the American Society of Mass Spectrometry (ASMS) Show in June as well as the Eastern Analytical Symposium (EAS) in November. Additionally, we will also continue to give technical presentations at relevant industry events. Call 269-985-5730 or visit www.leco.com for more information on our 2005 tradeshow appearances, and then mark your calendars to come out and see us! ■

Interested in learning more?

More information on articles or information featured in this issue of *The Analyzer* can be obtained by selecting one or more of the following categories.
Please fax this entire page to 269-982-8987.

❑ GCxGC-FID/ECD

❑ Separation Science Applications CD-ROM

❑ Pesticides Application Note

❑ Demonstrations featuring LECO's Separation Science instruments

❑ Please have a sales engineer contact me regarding a quote

❑ Please remove me from the mailing list (check here if you have received this mailing in error or no longer wish to receive issues of *The Analyzer*)

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