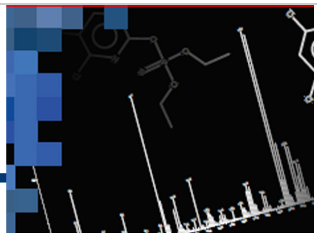
GC-TOF | GCxGC | AccuTOF-DART | TripleQuad GC-MS/MS | Single Quad GC | MALDI | HRMS

JEOLink Mass Media

Mass Spec Newsletter DECEMBER 2019

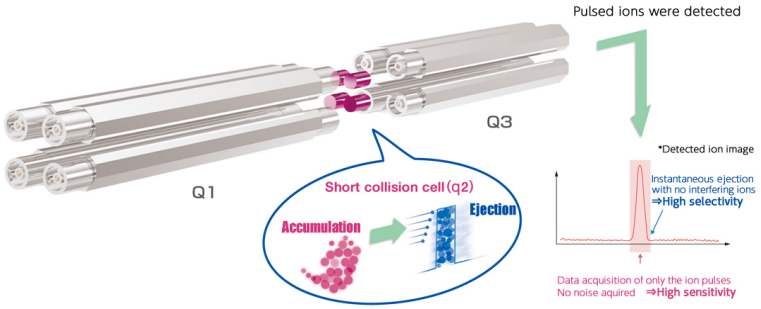


Mass Media Newsletter featuring latest news about JEOL mass spectrometry developments and applications.

Featured Mass Spectrometer

With 1,000 channels/sec, JEOL's new JMS-TQ4000GC has the fastest Selected Reaction Monitoring (SRM) switching speed in the industry. Our patented technology uses a **short collision cell** with ion accumulation and timed detection, resulting in a high-throughput GC-MS/MS system with both high sensitivity and ultrahigh speed.

Using the short collision cell makes it possible to instantaneously ejects all of the ions within the cell. This provides both high selectivity with the elimination of interfering ions, as well as the industry's fastest SRM.



The JMS-TQ4000GC is ideally suited for the rapid, accurate measurement of trace residual pesticides in agricultural materials. It greatly simplifies the quantitative analysis of persistent environmental pollutants such as dioxins and PCBs. Learn more about the new **TripleQuad JMS-TQ4000GC**.

REALab

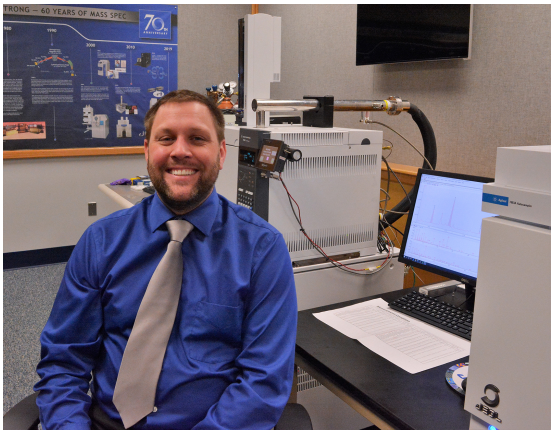
Revealing Ancient Secrets with Mass Spectrometry

Cathy Selvius DeRoo, left, and Ruth Ann Armitage examining ancient South American textile at the Michael C. Carlos Museum.

For some chemists, the science is their first love and the lab is where all their work takes place. For **Professor Ruth Ann Armitage at Eastern Michigan University**, the application of chemistry to the field of archeology has led her outside the lab to work with museum curators and archeologists and back again with some unusual samples to analyze. In her archeological chemistry work she uncovers how people used ancient formulas and recipes in their daily lives and has answered numerous questions about a wide variety of artifacts. Simultaneously, as a professor she has also helped a new generation of students learn real-world applications and how to use all the analytical tools available to them.

Some of Prof. Armitage's notable accomplishments include: Analysis of ancient pottery vessels containing a kind of Peruvian beer that researchers then were able to produce; analysis of ancient rock art in Cuba and Nicaragua; analysis of binding agent used to repair a punch bowl owned by George Washington's family; analysis of an ancient African mask. To read more about her fascinating analytical projects, **click here**.

New Applications Chemist Has Expertise in Variety of Mass Spec Techniques



Kirk Jensen has joined JEOL's mass spec team and is working with the new TripleQuad GC-MS/MS, investigating pesticide residue in honey, beeswax, spinach, and more.

JEOL's mass spec team conducts research on samples ranging from forensics to foods, plus we collaborate with customers on a variety of projects. This means that our chemists are very busy with experiments and research, as well as visiting customers and attending conferences. Consequently, this fall we welcomed the addition of a new team member, especially needed after the introduction of the new **Triple-Quad GC-MS/MS**, to our applications lab in Peabody, Massachusetts.

We'd like to introduce you to Dr. Kirk Jensen, a mass spectrometrist and applications chemist from Colorado who joined us in October. After obtaining a bachelor's degree in chemistry from the University of Northern Colorado, Kirk spent three years working in pharmaceutical and nutraceutical QA labs. He then obtained his Ph.D. in Applied Chemistry at Colorado School of Mines working with Professor Kent Voorhees. His primary research project was looking at VOCs in biodiesel combustion exhaust with mass spec, but he also worked on several microbiology projects including work with Bacillus anthracis, lateral flow immunochromatography, and MALDI of bacteriophages.

He has used a variety of mass spec techniques and instruments, and has expertise in multivariate statistical analysis of mass spec data. Most recently, Kirk worked for three years at Osaka University in Japan as a researcher and assistant research professor, where his projects included helium isotope analysis and testing saliva for stress biomarkers (mostly cortisol). There he learned to speak Japanese and took up Japanese calligraphy and Shorinji Kempo. His focus at JEOL will be putting the Triple Quad GC-MS/MS through its paces looking at pesticides in honey, bees wax, spinach, and other food

items that are most affected by pesticide residue. We look forward to adding his application notes to our resources for mass spectrometry.

2019 Mass Spec News in Review

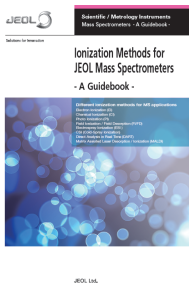
AnalyzerPro® Software

SpectralWorks, Ltd. (UK) is now distributing their **AnalyzerPro® software** for use with JEOL mass spectrometers. AnalyzerPro® provides analysis capabilities that include chromatographic deconvolution, target compound identification, sample-to-sample comparison, and chemometric analysis. In particular, this software is a powerful tool for examining high resolution MS data from the **JEOL AccuTOF-GCx-plus high-resolution time-of-flight GC/MS system**.

msFineAnalysis Software

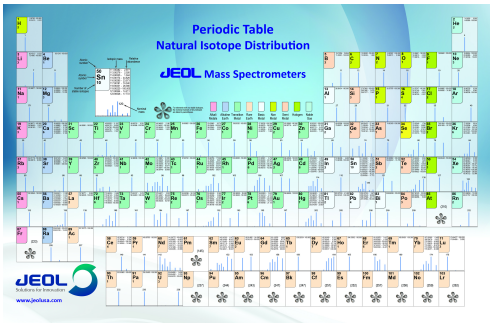
The **msFineAnalysis software** was developed by JEOL for the qualitative analysis of GC-high resolution MS (GC-HRMS) data. This software integrates the analysis of both GC/EI and GC/soft ionization HRMS data (GC/CI, PI, FI) to create a sample report that includes library searches, exact mass analyses, and isotopic abundance analyses.

Ionization Methods for JEOL Mass Spectrometers - A Guidebook

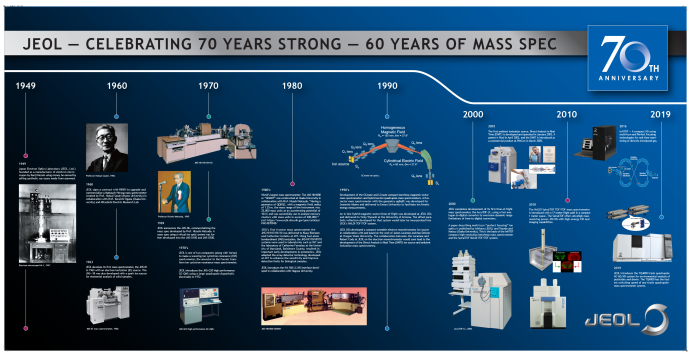


There is no one ionization method to support all MS applications. JEOL mass spectrometers offer a variety of ionization options that include ionization methods combined with LC or GC, direct sample analysis, hard ionization, soft ionization, etc. Our recently published guidebook describes the principles, characteristics, and applications for all of the available JEOL ionization methods. **Download here**.

Wrapping Up the International Year of the Periodic Table!



The International Year of the Periodic Table was proclaimed for 2019. Just a reminder that we have printed posters for the mass spec periodic table **Request a poster here**. Also available is this handy **app** for the smart phone or tablet - always take it with you!



The Anniversary of 60 Years of JEOL Mass Spec poster is also available for download or as a printed poster. Click the link above to request.

Seen In Our Newsfeed

Recent Papers and Articles Referencing JEOL Mass Spectrometers

[Compositional Analysis of Heavy Petroleum Distillates by Comprehensive Two-dimensional Gas Chromatography, Field Ionization and High-resolution Mass Spectrometry]

[Are You Squeamish? Let's Talk about Bugs.]

[Rapid paper spray mass spectrometry characterization of uranium and exemplar molecular species]

[Swab technique identifies opioids without opening packages]

[Detecting drugs and explosives in fingerprints]

JEOL will be at more than a dozen Mass Spec conferences this year. To see our preliminary schedule for 2020, click here.

11th Multidimensional Chromatography Workshop

Sun Jan 05, 2020 - Tue Jan 07, 2020 Location: Honolulu, Hawaii

AAFS – American Academy of Forensic Sciences

Wed Feb 19, 2020 - Fri Feb 21, 2020 Annual Scientific Meeting Location: Anaheim, California

Marine Natural Products – Gordon Conference

Sun Feb 23, 2020 - Fri Feb 28, 2020 Location: Ventura, California

Emerald Conference

Wed Feb 26, 2020 - Sat Feb 29, 2020 Location: San Diego, California

Pittcon

Tue Mar 03, 2020 - Thu Mar 05, 2020 Booth #3425 Location: Chicago, Illinois

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