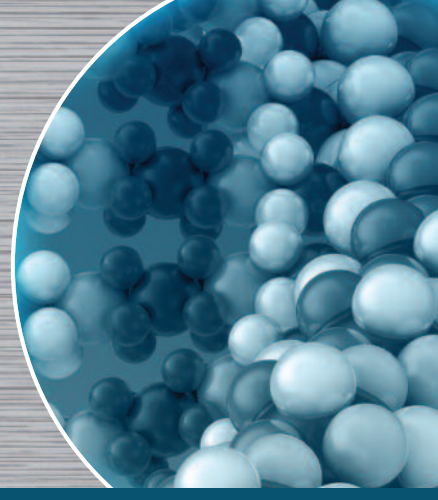
PITTCON™ CONFERENCE & EXPO 2013 PHILADELPHIA MARCH 17-21

SHOW REVIEW

BY PUBLISHER PARTNERS
INTERNATIONAL LABMATE



By Heather Hobbs

Philadelphia Rings Success for Pittcon 2013

Pittcon 2013, the 64th Conference and Exposition for Analytical Chemistry and Applied Spectroscopy, ended on a high note following its first appearance in Philadelphia. Preliminary figures for this global event, which was held at the Pennsylvania Convention Centre, were declared as 18,197 attendees; 40% of which attended the Conference for the first time. New this year was a strategic partnership between Pittcon and the co-located Food Labs Conference hosted by Food Safety Tech*: the organisers of both events were pleased with their first-year success and are looking forward to expanding the relationship.

Pittcon 2013 President Ronald Bargiel commented, "The food industry is one of Pittcon's top industries for growth. We are excited about this newly formed partnership with Food Safety Tech and look forward to working jointly to increase Pittcon's presence in the food industry."

Rick Biros, publisher of Food Safety Tech added, "Co-locating with Pittcon makes perfect sense for everyone. This partnership makes it possible for food industry lab managers to significantly benefit from the first conference [Food Labs] focused on their needs along with having access to thousands of laboratory technology suppliers at Pittcon—all under one roof."

International Visitors

Pittcon has always had a strong global presence, and 2013 was no exception with 28% of attendees being from outside the United States; top countries by attendance were Canada, China, United Kingdom, Japan, Mexico, and Brazil. The dynamic exposition floor consisted of 1,011 exhibitors from 28 countries occupying 1,925 booths displaying the latest innovations in instrumentation and technology used in laboratory science. This year, we welcomed 167 first-time exhibitors. There were three specialised areas on the floor —Life Science, Laboratory Information Management (LIMS) and New Exhibitors.

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Marian Nardozzi, Senior Marketing Communications Specialist for The Pittsburgh Conference was very upbeat about the success of this year's event and its location in Philadelphia. She told International Labmate:

"This was the first time that Pittcon was in Philadelphia. Philadelphia is truly in the 'centre of it all.' In addition to Pennsylvania, it is a short train ride from Washington DC, New York, Maryland, and New Jersey – all of which are heavy in the bio and pharma industries. The airport is only 8 miles from Centre City and easy access for international travel. The Pennsylvania Convention Centre (PCCC) recently completed its renovations making it a viable venue for Pittcon."

In terms of success for exhibitors, early indicators suggested an overall high level of satisfaction. Marian responded; "Preliminary reports and feedback was very positive. Exhibitors seemed to be happy with the traffic. Monday was a very heavy traffic day on the floor. Many reported that Monday and Tuesday were very high volume and very high energy. Initial reports came back that some companies surpassed leads for the entire week from last year by Tuesday."

While attendance data of any cross-over of visitors between the Food Labs Conference and Pittcon was unavailable at the time of this report Marian was also very positive about the partnership:

"Food Labs Conference was a huge success and the organisers were very pleased with the arrangement. We have already started plans for co-locating again in Chicago for 2014. We do not have the processed attendance data; however, there were initial reports that exhibitors were visited by Food Lab conferees. Registration for FL included free admission to Pittcon".

As with all Pittcon events the local region plays an important and integral role in Pittcon's conference structure and educational events aimed at bringing science and knowledge into the communities. One of the region's biggest economical projects centres around the extraction of natural gas from the Marcellus and Utica Shale beds in the Appalachian Basin which has potential as a huge supply for the Eastern United States. This was a major topic of discussion at Pittcon as part of a focused environmental analysis theme which appeared to have a stronger element at this year's show:

"We have been including a stronger environmental focus at Pittcon as global, as well as, regional current events develop. Marcellus Shale was a focus this year given the location of the conference. We did offer a Conferee Networking session, "The Future of Marcellus Shale, which was very well attended. It was facilitated by the Secretary of the Department of Environmental Protection, Michael Krancer," Marian said.

"Life science sessions continue to be a significant portion of the technical program accounting for approximately 40% of the technical presentations. As for other disciplines, these are about the same as they have been in previous years. There was a bit more emphasis on food science and nanotechnology this year as well. Conferees seemed pleased with the expo and the conference in general," she added

When asked about whether any new developments impacted on the levels of visitors at the show Marian concluded: "This is really hard to measure. I strongly believe that it is not just one new development that impacts the attendance, but more a combination of a strong exposition with leading companies from around the world, diversity and quality in the technical program to cover topics to appeal to a wide variety of disciplines, and a variety of short courses. I think that to be a successful event, especially in a time when travel budgets are decreasing, you have to give people many different but compelling reasons to attend, and they will. We build in a great deal of value for a very low registration fee (compared to registration fees of similar shows)."

The Short Course program offered an opportunity for skill-building training and continuing education for laboratory professionals. Participants have stated that these courses are another factor in selecting Pittcon as the one conference they attend every year. This year, 100 short courses were offered covering a wide variety of topics with a special emphasis on nanotechnology specifically nanomaterials, health/safety, and nanotechnology in life science. Lab management courses are a significant part of the program and provide critical insight into the interpretation of the requirements of regulatory aspects, global guidelines, and laboratory standards. The diverse selections, ranging from beginning to advanced levels, were attended by more than 1,400 participants.

**Published by Innovative Publishing*

Pittcon offered more than 2,000 technical sessions presented in 78 symposia, 12 awards, 93 oral sessions, 12 workshops and 62 posters.

Enhanced Presence of the Chemical Heritage Foundation (CHF) at Pittcon 2013

For the past 13 years, The Chemical Heritage Foundation (CHF) has partnered with Pittcon to produce a historical depiction of chemistry through its renowned Pittcon Hall of Fame to which all Pittcon attendees have access.

This year, as a salute to the 100th year anniversary of mass spectroscopy, the CHF had an enhanced presence at Pittcon 2013. Located in the main registration area, was an instrumentation museum featuring the J. J. Thomson Monograph that initiated the birth of mass spectrometry, and an interactive display that traces the evolution of MS from early vacuum tube instrumentation to modern miniaturised systems used in modern applications.

In addition, the CHF presented a symposium, Instrumentation Innovation: A Personal History of Instruments and Innovation, which included presentations by David Brock (Instruments, Automation, Bits, and Palm Trees: Instrumentation Firms and the Early Computer Industry) and Rosie Cook (More Than Black Boxes – Using Instruments To Tell The Personal Side Of Chemistry).

Pittcon Editors' Awards

Senova Systems Takes Gold at Pittcon Editors' Awards

Senova Systems' pHit Scanner was voted the top new product at Pittcon 2013 by the editors covering the show in Philadelphia.

The pHit Scanner, said to be the world's first calibration-free pH meter and Senova Systems' first product offering is now commercially available. The pHit Scanner's technology platform incorporates an advanced sensor and electronics, eliminating glass electrodes completely.

"We are honoured and thrilled to be the recipient of the 2013 Pittcon Editors' Gold Award, which is a testament to the breakthrough technology of our pHit Scanner," said Lee Leonard, CEO of Senova Systems. "Since its inception over 63 years ago, Pittcon has been one of the most important international conferences for laboratory science. We were gratified by the accolades we received from the press, as well as by the hundreds of inquiries from prospective customers. The pHit Scanner clearly represents the future in pH measurement."

Stefan Fritsch, editor of Instrument News, presents 2013 Pittcon Editors' Award to Lee Leonard, CEO of Senova Systems

Silver Editors' Award for Optofluidics Nanotweezer System

Optofluidics won the Silver Editors Award for its Nanotweezer system. This enables reversible, nanomanipulation and trapping of individual cells, viruses, nucleic acids, metal nanoparticles, carbon nanotubes and some proteins at the flip of a switch.

Bronze Award Shared

Pie Photonics based in Ireland and Hilton Head Island, SC received the joint-Bronze Editors Award for its Pie-in-a-Box™, a portable, no-moving parts no scanning elements, interferometer technology that measures spectral content via Fourier Transform.

Pie™ Technology uses a passive optical engine to produce a spatial interference pattern across a detector array. The detector array is used to capture the interferogram for signal processing and analysis. A range of Fourier processing, fringe counting and weighting algoritms are used to analyse the interference fringes to measure delay, phase and spectral information to make measurements.

APIX based in both France and the US was the joint-Bronze Editors Award Medal Award for its breakthrough multigas analysis platform using nano silicon technology.

APIX (Analytical Pixels Technology SAS), a VC backed startup incorporated in December 2011, is the commercial emanation of 8 years of collaborative research between CEA (French Alternative Energies and Atomic Energy Commission), California Institute of Technology (Caltech), the US Department of Energy, and Sandia National Laboratories.

"We have been exhibiting at Pittcon for decades…every year, the experience gets better and better…not just the quantity, but in quality of interactions."

Ken Grant, Director of Sales and Marketing for Analtech

Pittcon 2014 will be held March 2-6, McCormick Place, Chicago.

Bundled Solutions for Systems Biology

Leco Corporation and AB Sciex announced combined chromatography/mass spectroscopy solutions for measurement of analytes in biological systems. Metabolomics researchers would have at their disposal pairings of time-tested nominal mass systems as well as industry-leading high performance GC-TOF and LC-QTOF MS systems. The application support and service teams of both companies will work together to ensure that users get the support they need to run their comprehensive experiments.

"As an industry leader in LC/MS, we interact with metabolomics researchers all over the world, and we understand that there are times when metabolomics researchers want to use both GC/MS and LC/MS," said Aaron Hudson, Senior Director, Academic and Omics Business, AB Sciex. "Representing a virtual one-stop shop for metabolomics mass spectrometry, the joint bundles from AB Sciex and Leco provide users with greater flexibility in chromatography while obtaining the rich information that MS/MS delivers."

"Bringing together leaders in GC/MS and LC/MS and facilitating the availability of our systems as complementary technologies helps ensure that metabolomics researchers can approach their work to obtain the very best data and information available," said Jeffrey Patrick, Director of Marketed Technologies for Leco. "Our leadership in GC/MS technologies is a perfect complement to the offerings of AB Sciex and puts the combined power of our product portfolios, expertise, services, and support to work for these researchers."

The joint bundles from AB Sciex and Leco will be available in North America and Europe.

MORE INFO. 82

Connecting Analytical Content with Chemical Context

ACD/Labs announced the commercial availability of ACD/Spectrus DB. This powerful database is at the core of the Spectrus integrated analytical and chemical knowledge management platform and is the culmination of a three-year effort resulting in the completion of the Spectrus platform which provides a variety of productivity-increasing enhancements, collaborative science, and the preservation of analytical intelligence.

The platform puts an end to the 'one-and-done' life cycle of analytical data to aid chemistry groups who are trying to maximise their return on investment for data generation. With the Spectrus platform, ACD/Labs builds upon its broadly accepted desktop applications and unique algorithms to unify chemical and analytical information into a homogeneous environment.

Live data can be searched and re-analysed, and chemical intelligence re-applied. The result is a 'one-to-many' information-from-intelligence live cycle that brings unified laboratory intelligence to scientists all across the chemistry organisation. Spectrus DB can also be integrated with existing informatics systems to enhance their capabilities and achieve maximum return on investment.

The Spectrus DB can be easily configured to meet the needs of individual organisations and laboratories. Customisation can add automated processing and interpretation for higher productivity, while sample tracking and visualisation may be added to meet workflow requirements.

MORE INFO. 66

Instruments Meet Challenging Applications

Bruker CAM division featured its the double-award winning SCION GC-MS TQ alongside the EVOQ LC-MS/MS TQ and aurora Elite ICP-MS, both making their Pittcon debut. All three instruments focus on ease of use, software enablement, sensitivity and also address the need to power the business of quantitation.

The EVOQ Elite LC-MS was also said to set new standards for sensitivity and performance, incorporating VIP-Heated ESI, Active Exhaust, Orifice Interface and exception-based data review software.

The aurora Elite ICP-MS available at 1.5 GHz/ppm, offers scan speeds and 100 µs integration times and is engineered to provide robust plasma conditions for complete matrix decomposition. It meets compliance for the use in the pharmaceutical industry with full 21 CFR Part 11 compliance support.

"Our product specialists have created this range of industry leading instruments through continually innovating to reflect the requirements of today and tomorrows analytical challenges and applications", commented Rohan Thakur, Vice President of Bruker CAM. The company serves markets in food safety, environmental monitoring, water monitoring, forensic sciences, petrochemical and pharmaceutical research.

MORE INFO. 67

Heating with Ease and Safety

Carbolite exhibited its range of furnaces and ovens for laboratory applications. Heat-treatment instruments included the HST 12 Horizontal Split Tube furnace, which allows easy exchange of worktubes for different applications. The CWF box furnace, with hard wearing refractory insulation and a robust design which ensures that the hot face of the door faces away from the operator when opened, was also on show. The company's portfolio offered by Carbolite includes both elite laboratory chamber/box furnaces & laboratory tube furnaces to 1800°C. Tube furnaces are available as single or multi-zone, horizontal/vertical, split & rotating models. A wide variety of tube diameters and tube heated lengths is available. Chamber/box furnaces are available in many sizes and models include high temperature furnaces, ashing/calcining furnaces, furnaces for the analysis of coal and coke and precious metals evaluation furnaces (cupellation/fire assay). Pilot plant and industrial furnaces and industrial ovens for various heat treatment applications are also offered.

Having joined the laboratory division of Verder International BV in 2012, Carbolite attended the exhibition alongside fellow Verder group member Retsch, specialists in the fields of homogenising laboratory samples for analysis as well as particle size analysis of solid substances. Through Retsch Technology the company also develops optical measuring systems for particle characterisation based on dynamic image analysis and laser light scattering, spanning from 0.3nm to 30mm.

MORE INFO. 68

Challenging Applications Issues

Edwards Group Ltd exhibited a range of high performance vacuum equipment and for the first time had a dedicated team of technology experts available for its 'Challenge Us' campaign which invited customers to bring their current vacuum application challenges to the booth for discussion.

Displayed was the new nXDS dry scroll pump; its pumping speeds, ultimate pressures, low acoustic noise levels and reduced power consumption, make it an ideal 'fit and forget' pump for the laboratory.

The nEXT turbomolecular pump, which received the 2012 Queen's Award for Enterprise in Innovation, has a modular design for rapid customisation to meet specific customer requirements. The compact T-station 75 turbopumping cart can produce required vacuum up to twice as fast as some competitive products through higher capacity backing pumps, making it an excellent 'plug and play' solution for those wanting to achieve high vacuum quickly and simply.

Reporting from the show David Steele, Market Sector Manager, Edwards said: "We are excited to be attending Pittcon 2013 with a range of high quality products. We are looking for customers to come to our stand, share their challenges and allow us to demonstrate our expertise in the field of vacuum through helping to identify practical solutions. Edwards' success has not only been down to the innovative products we are able to supply, but by partnering with our customers and providing solutions for the challenges of tomorrow. This is backed by the largest customer service footprint in the industry."

MORE INFO. 69

"Pittcon remains the premier instrumentation show in the USA with many of the key decision makers attending"

Ambient Ionisation System Extended to GC/MS

IonSense Inc introduced the DART®GSX™ System for the Agilent® GC/MSD, for the first time enabling ambient ionisation on a GC/MS instrument. With this combination, customers can effectively add the benefits of Direct Analysis in Real Time (DART)-rapid analysis with little or no sample preparation and simplified spectral analysis- freeing chemists and analysts to focus their attention on other tasks.

The system includes a DART G12 source and the GSX™ Interface coupled to the Agilent GC/MSD. Routine analyses are facilitated by the QuickStrip™ Sample Cards on the linear rail scanner unit for analysis of up to 12 samples in a single unattended experiment.

"We are excited to be able to extend the benefits of DART to labs that utilise GC/MS instruments," said Brian Musselmen, IonSense President and CEO. "Until now we have only been able to supply DART to customers that have an LC/MS instrument in their labs. Though there are now several hundred DART units in the field, we are looking forward to working with the thousands of labs where GC/MS is the mainstay of their efforts."

Alongside the DART GSX System and its line of ambient ionisation sources, the Company also displayed the ID-CUBE® with its OpenSpot™ Sample Cards for easy sampling and near-instantaneous results, the DART OS for using OpenSpot Sample Cards as well as other sample form factors, and the DART SVP for complete flexibility and automation of analysis.

MORE INFO. 70

Fun-Display Cloaks Serious Science

Ocean Optics revealed a novel trade show display – a fully functional, in-line gumball sorting machine, which while fun to watch concealed an optical system comprising nearly a dozen spectroscopy measurement stations positioned throughout an 8-foot-tall, 6-sided structure. Stainless steel rails delivered the gumball samples to each station, where spectrometer setups measured chemical composition, colour and reflectivity. The different stations determined characteristics such as absorbance and fluorescence of food colouring and flavours, transmission characteristics of plastic containers and oxygen content in packaging. Techniques as varied as Raman analysis, fluorescence, UV-Vis absorption and NIR spectroscopy were represented.

Each station in the gumball sorter acted as an independent analyser: after measurements were made and recorded, a software response triggered a second device -a motorised gate – to direct the sample to the next measurement or a sorting bin. While a gumball sorter could have been considered whimsical, it enabled the company to successfully demonstrate that the instruments and technique s used could be implemented into a process stream, used in a lab or field setting or incorporated into another sensing device, the Company pointed out.

MORE INFO. 71

In-Show - Online Flow Meter Solutions to Hand

Sierra Instruments, a global leading manufacturer of mass flow meters and controllers demonstrated its online store which offers researchers and scientists customised and calibrated gas flow measurement and control solutions for any application or budgetary requirement.

With a large, factory-direct stock of scientific mass flow meters and controllers available, on-line orders are quickly dispatched for next day shipping with no expedite fees. Sierra's proprietary selection tool allows customers to easily configure and purchase their instrument of choice without loss of delivery time.

Since customers are buying factory-direct and not from a third party provider, customers have instant access to a global network of Sierra flow experts for help with any application along with a lifetime service guarantee.

"We are thrilled to offer scientists the convenience and speed of ordering in stock mass flow meters and controllers online, while still supporting our customers through factory-direct expertise and local support through our global network of Sierra flow experts. It's the ideal customer service hybrid for selling customised instrumentation online-ease of ordering, deliver speed, and full-service engineering support." said, Erica Giannini, Sierra's Online Sales Director.

Flow meters and controllers are available for any gas and any output signal, with digital communications and a variety of cable options. Sierra also offers a selection of clamp-on ultrasonic flow meters for measurement of liquids, flow switches, and light industrial flow meters on its flow meter store site.

MORE INFO. 72

Column Combination for Lab-Scale Purification

Phenomenex Inc announced Kinetex® Core-Shell media packed in Axia hardware for preparative HPLC and SFC in lab-scale purification. Kinetex 5-micron particles in four phases ¬– C18, XB-C18, Phenyl-Hexyl and PFP – are now offered in 21.2mm ID Axia packing. This marks the first time that core-shell media has been offered in the Phenomenex Axia preparative format, which can deliver longer column lifetime, and higher efficiencies. Kinetex 5-micron core-shell media is the largest particle in the family and delivers better performance than 5-micron fully porous offerings, with no increase in backpressure. In fact, the new 5-micron media provides 60 to 90% higher average efficiencies compared to the same size fully porous columns with little to no method development, the Company said.

The Phenomenex patented Axia packing and hardware technology, introduced in 2005, eliminates the drawbacks of traditional slurry packing, delivering uniform bed density and dramatic performance advances. "This announcement brings together two award-winning technologies from Phenomenex," explained J.T. Presley, Brand Manager for Phenomenex. "Every Axia preparative column has been optimised for each packing media to improve column-to-column reproducibility and increase packing densities, resulting in higher efficiencies and prolonged column lifetime."

MORE INFO. 73

Chip-Based MS Broadens Possibilities

Microsaic Systems plc, a producer of MS instrumentation using Micro-Electrical-Mechanical Systems (MEMS) technology, showcased the Microsaic 4000 MiD.

The company is the first to have commercialised mass spectrometry (MS) technology on a chip based on MEMS technology originating from the Optical and Semiconductor Devices Group at Imperial College London. The company's breakthrough product, the 3500 MiD launched in January 2011, was a step change in ease of use and for its small MS footprint and won an R&D 100 Award.

Bringing together chemical analysis and silicon micro-engineering – the 4000MiD provides detection in an even smaller instrument. Fitting comfortably into a standard lab fume hood, it offers potential for reaction monitoring.

Colin Jump, CEO, Microsaic Systems said: "Offering the smallest footprint in the market, the Microsaic 4000 MiD is a fully integrated, versatile, portable MS system designed for bench chemists. The core technologies are chip-scale versions of traditional mass spec components which can be interchanged rapidly by the user. This modular approach allows users to maintain the system without the need for expensive service contracts and time-consuming call-outs."

MORE INFO. 74

Platform for Enhanced Fluorescence Applications

NanoSight introduced the NS300 particle characterisation system for visualising and measuring particles in suspension in the size range of 10-1000nm (material dependent), addressing a wide variety of applications including protein aggregation, exosome and microvesicle research, and drug delivery systems. Built on the company's signature Nanoparticle Tracking Analysis (NTA) technology this new instrument provides characterisation under the new EU Definition of Nanomaterials, and is particularly suited to the analysis of particles labelled with fluorescent quantum dots.

Dr Patrick Hole, NanoSight's Head of Product Development, said: "The NS300 is the natural progression from the NS500 and LM10. It takes the most popular features of these instruments and combines them into an easy to use, compact format. We then added in the high capacity motorised fluorescence disc. This disc, capable of being programmed from within the software to present up to six different fluorescent filters, will facilitate a more detailed assessment of fluorophores. It will give users the possibility to analyse each fluorescence population in terms of size and concentration; this ability to identify co-localised fluorophores will greatly enhance specificity and the ability to Phenotype".

Additionally, the software's new rheology feature can measure viscosity in the range 0-5 centipoise, using probe particles to inform on non-Newtonian liquids in a shear-free manner, so being specifically applicable to the formation processes of hydrogels.

MORE INFO. 75

Handheld and Benchtop Instruments for Diverse X-Ray Analyses

Rigaku displayed its benchtop lines of X-ray diffraction (XRD) and X-ray fluorescence (XRF) instrumentation, together with a line of handheld and portable Raman spectrometers, including the 600WMiniFlex benchtop X-ray diffractometer and Supermini200 benchtop wavelength dispersive X-ray fluorescence (WDXRF) spectrometer. These powerful, transportable instruments deliver speed and sensitivity through innovative technology and packaging. The 600W MiniFlex is the only one with an available sample changer and the Supermini200 is the only commercially available benchtop WDXRF spectrometer, said the Company.

Applied Rigaku Technologies introduced NEX QC+ a low-cost benchtop energy dispersive X-ray fluorescence (EDXRF) spectrometer for rapid quantitative determination of sodium (11Na) to uranium (92U) in solids, liquids, powders and alloys. Designed for routine QC uality control it features an 'icon-driven' touch screen interface and a built-in printer. The ART division is also introducing the Rigaku NEX OL, for on-line, multi-element analysis of aluminum (13Al) to uranium (92U) in process liquids or for coating thickness and elemental composition in web and coil applications.

Rigaku Raman Technologies showcased an advanced version of its flagship FirstGuard™ handheld Raman analyser featuring updated architecture software upgrades and incorporating for the first time 1064nm wavelength excitation. Complementing these product improvements, RRT has a new manufacturing facility in Tucson, Arizona.

MORE INFO. 76

Work Scheduling from Anywhere

Introducing software which will be available worldwide in June, Abbott's Starlims announced that its new Version 11 will expand user functionality to include mobile-device applications, advanced analytics and HTML5 compatibility. This expanded platform will allow Starlims users to access LIMS information anywhere with Apps offered out of the box for quick start-up. The software allows access via Chrome, Safari and other alternative browsers to display LIMS information on tablet computers and smart phones

Two new control libraries are included in V11 software: one for forms to be run on desktop computers using alternate browsers and the other will contain controls commonly found on tablets and smart phones that use touch screens. The touch controls are similar to those specified by Apple for i-Pads and i-Phones.

By selecting the right screen for the task lab managers can provide clients on-the-spot access to lab test results and reports, authorise lab results and release remotely, also record observations during field inspections. V 11 software also offers users advanced analytics capabilities with out-of the-box dashboards that can make an immediate impact on laboratory operations, such as optimising workflow and identifying bottlenecks as well as providing insights and trends to help make better decisions.

MORE INFO. 77

ICP-OES Designed to Streamline Workflows

Amongst new products featured by Thermo Fisher Scientific Inc, the Thermo Scientific iCAP 7000 Series optical emission spectrometer has been designed to facilitate trace elemental analysis in pharmaceutical, environmental, industrial, and food and beverage analysis applications, including regulated environments. Driven by Qtegra Intelligent Scientific Data Solution software workflows can be customised in three simple steps from sample introduction through reporting and data interpretation. Pre-optimised methods simplify method development tasks, and powerful method development tools guide users through the process, facilitating even advanced workflows.

"Customers continuously cite the need to increase productivity and control costs, and we've built this platform for them," said Adrian Holley, Marketing Director, Trace Elemental Analysis, for Thermo Fisher. "The combination of accessible hardware and powerful software is designed to help even new users quickly get the results they need."

Also unveiled was the Thermo Scientific Dionex UltiMate 3000 Electrochemical Detector, said to make the speed and resolution of UHPLC separation available with electrochemical detection. The new Thermo Scientific TriPlus 300 Headspace Autosampler, designed for fast start-up, high productivity, and flexibility for analysing organic volatiles, along with a range of new consumable products were also displayed.

MORE INFO. 78

Enhanced Portable GC for Field and Lab

Torion Technologies Inc announced significant upgrades to its TRIDION™-9 GC-TMS, portable capillary gas chromatograph – toroidal ion trap mass spectrometer (GC-TMS). Features include a low thermal mass capillary gas chromatograph (GC) with high speed temperature programming (>2 °C/sec) and a miniature toroidal ion trap mass spectrometer (TMS) with a nominal unit mass resolution over a mass range of 50 to 500 Daltons.

The system is totally self-contained, weighs ~ 32 pounds with all accessories, is battery operated (30 V Lithium Ion), has an on-board helium GC carrier gas supply cartridge (2500 psig, 90 cc), and is person portable. Packaged in a specially-designed, hardened enclosure with dimensions of 15.0" (wide) x 15.5" (deep) x 9" (high), the TRIDION-9 GC-TMS features electronic pressure control (EPC) of the helium GC carrier gas and an on-board rechargeable battery system for renewable power. Expanded on-board library search capabilities, calibration and performance validation routines, addition of the NIOSH database, quantitative results, and two new sampling accessories have been added.

Using PC-based operating CHROMION® software (newly release Version 1.1), the user can edit the GC-TMS method parameters, calibrate the instrument, and develop quantitative target analyte libraries. The new CUSTODION®-NT (Needle Trap) provides active air sampling for quantitative determinations in the low parts per billion concentrations for VOCs in air. It can be coupled with a conventional thermal desorption trap for two-stage thermal desorption using the FUZION™-3 Sample Prep Station for measurements in parts per trillion. Torion's FUZION-IS Internal Standard module, which uses new solventless CALION™ standards can easily be added.

MORE INFO. 79

Breakthrough in Advanced Polymer Analysis

Waters introduced the ACQUITY® Advanced Polymer Chromatography™ (APC™) System which is said to deliver improved polymer peak resolution, particularly for low molecular weight polymers and oligomers up to 20 times faster than traditional gel permeation chromatography (GPC). Developed in collaboration with The Dow Chemical Company, this refractive index detector has been optimised for low dispersion, with low noise and drift performance.

With precision flow delivery, the instrument features new column technology based on rigid, sub 3 micron, high-pore-volume bridged-ethyl hybrid particles that provide gains in stability and faster separations. Ian King, Waters Vice President of Separations Technologies, noted that APC represents a major change from soft gel columns that are susceptible to swelling in the solvents used for polymer analysis.

"With APC, scientists can run diverse polymer applications on a single system, on one bank of columns with a variety of solvents," he said. "Now our customers can significantly improve laboratory efficiency and asset utilisation. This collaboration with Dow is an example of what can happen when you merge leading edge technology with excellent innovation and effective collaboration." Industry is on a constant quest to identify and understand the properties of new materials while making the process of innovation faster, simpler and more sustainable," said Dow's Jim Alexander, Associate Research & Development Director, Core R&D Analytical Sciences. "This new capability will help solve critical R&D challenges, helping scientists to drive to solutions more quickly, with improved data quality."

Waters also announced Paradigm™Scientific Search Software, which performs object-based searches across different data platforms; new Quality Control Reference Materials (QCRMs) and Certified Containers.

MORE INFO. 80