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Agilent Introduces breakthrough ICP-MS and MP-AES platforms

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Agilent Technologies Inc has recentlyintroduced the 7900 Inductively Coupled Plasma - Mass Spectrometer (ICP-MS) and the 4200 Microwave Plasma - Atomic Emission Spectrometer (MP-AES), the latest in a series of groundbreaking technologies featured in Agilent's portfolio of spectroscopy solutions.

The 7900 ICP-MS and 4200 MP-AES are the most sophisticated, user-friendly elemental analysis technologies available today. Newly streamlined operational features also make them ideal for a wider range of challenging applications and more accessible to a broader spectrum of laboratory personnel.

"At Agilent we continue to introduce 'new to market' technologies across our platforms, enabling our many customers to expand their labs' capabilities and simplify their workflows," said Philip Binns, Agilent vice president of spectroscopy products. "The introduction of the 4200 MP-AES and 7900 ICP-MS further demonstrate our leadership position in elemental analysis and our commitment to providing our customers with the best tools to meet their application needs."

7900 ICP-MS: A New Standard in Quadrupole ICP-MS Performance

"The 7900 ICP-MS redefines the way we analyze samples by extending the application range significantly," said Wim Proper, development analyst, Eurofins Analytico. "With its unprecedented ultra-high matrix capability, the 7900 allows us to easily switch between trace element analysis of demineralized water to high total dissolved solid digests all in the same sequence."

The 7900 ICP-MS is a complete redesign, sharing only a few key components from the world's bestselling 7700 Series. The 7900 has been engineered and optimized to provide elemental laboratories with the industry's most powerful and easy-to-use quadrupole ICP-MS solution. Features include:

Unprecedented matrix tolerance - Ultra-high-matrix introduction technology enables laboratories to measure samples containing up to 25 percent total dissolved solids, 10 times higher than the current benchmark held by the 7700 ICP-MS limit. This enables direct measurement of sample types previously inaccessible by ICP-MS.

Enhanced trace-level detection - A novel interface design, optimized expansion-stage vacuum system and new orthogonal detector system (ODS) reduce background and improve sensitivity, dramatically improving signal to noise for 10-fold lower detection limits than any quadrupole ICP-MS system available today.

Widest dynamic range of any quadrupole ICP-MS - Patented ODS technology delivers up to 11 orders of magnitude dynamic range, from sub-ppt to percent-level concentrations, which enables users to measure trace elements and majors in the same run. An industry-first capability, this eliminates analyte-specific tuning and simplifies method development, virtually eliminating over-range results.

Redesigned MassHunter software features a simpler, more intuitive user interface along with powerful method automation capabilities. Another industry first, the new method set-up wizard makes method development easier than ever, automatically building methods based on answers to a simple user questionnaire.

4200 MP-AES Series: A Novel Breakthrough in Entry-Level Elemental Spectroscopy Technology

"The 4200 MP-AES, the latest advancement in Agilent's broadly used microwave plasma-atomic emission spectrometer series, provides the safest, most expansive yet cost-effective elemental analysis capabilities compared with any other entry-level atomic spectroscopy technology," said Agilent's Keith Bratchford, general manager, Atomic Spectroscopy Products.

The 4200 MP-AES features a variety of unique capabilities:

Safe and economical - Because flammable and oxidizing gas sources are not required for use, the system can be left unattended while performing overnight multi-element analysis, which dramatically increases laboratory safety and flexibility and reduces operating costs compared to Flame AA.

Robustness and reliability - Optimized high-performance waveguide and new torch design produces a robust nitrogen plasma, which enables greater tolerance to complex matrix samples such as those used in mining, food and agriculture, chemicals, petrochemicals and manufacturing. Mass flow control of the nebulizer gas enhances accuracy and long term stability in complex samples.

Ease of use - Application-specific software applets plus plug-and-play hardware ensures that with just minimal training, any user can quickly and easily conduct analyses without the need for method development or alignment.

Advanced software platform - Newly released MP Expert software features advanced tools such as "FLIC" and IECs for assisting in eliminating spectral interferences.

Mobile and remote capabilities - With no external cylinder connections and no need for ongoing gas supplies, the MP-AES is ideal for any elemental analysis laboratory-especially remote sites and mobile laboratories. This eliminates the need to plumb multiple gasses into the laboratory or manually transport and handle hazardous gas cylinders.