

UHPLC-MS Instrumentation

New, exceptionally pure mobile phase solvents for ultra-high-performance liquid chromatography-mass spectrometry (UHPLC-MS) instruments have been designed to reduce background signal and minimize chromatographic interferences, facilitating accurate, sensitive, and rapid trace analysis. Fisher Chemical Optima UHPLC-MS solvents are high-quality, ultrapure, and designed to address the trace analysis needs of chromatographers performing state-of-the-art UHPLC. These new solvents are qualified for use with UHPLC/MS instrumentation. UHPLC-MS is becoming the preferred technique to LC-MS in analytical laboratories, as it enables users to perform separations substantially faster due to the innovative sub-2 μm columns. Submicron filtration also reduces clogging of instruments, columns, and check valves. A typical LC-MS gradient run can take up to 60 minutes, whereas UHPLC-MS can reduce this to just 5 minutes while yielding a similar resolution without compromising flow rates. Optima UHPLC-MS solvents are ideal for detecting trace amounts of analyte by tandem mass spectrometry (MS/MS) using either gradient or direct-flow analysis without baseline interference.

Thermo Fisher Scientific

For info: 800-766-7000
www.fishersci.com/fisherchemical

Mass Spectral Database

Scientists conducting research in metabolomics, environmental science, forensics, and food safety can now turn to a globally accessible, web-based fragmentation library for identification of unknown compounds with high-quality, high-resolution accurate-mass (HRAM) data. Developed through a collaboration between Thermo Fisher Scientific and HighChem, mzCloud is a novel, searchable library of HRAM mass spectra, constructed from high-quality data from Thermo Scientific Orbitrap mass spectrometers. The mzCloud offers a tool for researchers who need to identify unknown compounds based on mass spectrometric data. It features a broad diversity of chemical compounds, extensive use of mass spectrometry to reveal substructure information, and a high level of data curation. In addition, production fingerprinting uses extensive mass spectrometry data to identify substructures for truly unknown compounds.

HighChem

For info: +421-2-5263-7868
www.mzcloud.org



Digital Dispenser

The D300e Digital Dispenser is designed for applications that need faster, reliable dispensing down to picoliter volumes. This innovative, easy-to-use device is ideal for the creation of assay plates and can cut setup times from hours or days to just minutes. Users can choose between dispensing aqueous solutions in combination with a surfactant—for the investigation of proteins, antibodies, enzymes, and nucleic acids—and dimethyl sulfoxide (DMSO) for small molecule studies, offering greater flexibility for life sciences workflows. The system's sophisticated yet simple software guides you through every operation, minimizing training times and problem-solving callouts, and providing straightforward setup of enzyme profiles, dose-response curves, and synergy studies. Even the most complex experimental plate layouts can be quickly and easily generated, with optional randomization to reduce the impact of edge effects and increase data integrity. The D300e is compatible with a wide range of microplate formats from 12 to 1,536 wells, including deep-well plates and Society for Biomolecular Screening (SBS)-format tube racks.

Tecan

For info: +41-44-922-81-11
www.tecan.com/d300e

Automation Platform

The MKS Automation Platform is a modular, scalable, and configurable solution for comprehensive control that improves operational and productivity efficiencies. It offers low total cost of ownership and improves utilization of existing tools and assets. The Automation Platform seamlessly integrates with other MKS products, and its library of process routine templates and function blocks facilitates faster implementation. The platform's hardware and software are both scalable and flexible due to its modular, open architecture and its support for many fieldbuses and control networks. It consists of two programmable automation control options; a variety of input/output (IO) modules for interfacing to any type of sensor, actuator, valve, etc.; and the MKS Controls Workbench software for configuration, process monitoring, tuning, and data storage. MKS integration services assist in recipe and logic development, integration, and training. The platform's compact, high-density design reduces the number of modules and controllers required, saving cost and tool real estate.

MKS Instruments

For info: 978-645-5500
www.mksinst.com

Fluorescence Spectroscopy Systems

The new Ultima TCSPC Fluorescence Lifetime system combines the latest in high temporal resolution time-correlated single photon counting (TCSPC) electronics, interchangeable high speed light sources and detector technologies, and Horiba Scientific's FluoroCube, the most flexible dedicated lifetime optical platform, to offer the highest performance photon counting lifetime system available. The Ultima's 400 fs/point time resolution enables it to measure the shortest lifetimes of any comparable commercial system. Its measurement range of 100 ns to seconds, the flexibility of its 16k time channels, and the simplicity of its USB PC connection also make the Ultima easy to use. The Ultima can also be configured for use with microchannel plates (MCPs), femtosecond (fs) lasers, near-infrared (NIR) detectors and emission monochromators to support virtually any experimental configuration. For those who routinely measure lifetimes below 100 ps, the new Ultima TCSPC offers unprecedented short lifetime performance with exceptional flexibility and ease of use.

Horiba Scientific

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