



What's New

LABORATORY EQUIPMENT

Liquid Chromatography Units Are Fully Automated

The i-Series of integrated liquid chromatography systems includes Prominence-i and Nexera-i for high- and ultra-high-powered liquid chromatography (HPLC and UHPLC). An intuitive operating environment and fully automated design enhance performance and workflow. If integrated with the LabSolutions software, the instruments can operate in interactive communication mode (ICM) to send data to a lab's server for management and storage. ICM also allows users to perform operations from anywhere in the facility on a smart device. Operation is simple, and concentrated samples can be injected directly without dilution. These units achieve processing speeds more than twice as fast as the manufacturer's previous models.

Shimadzu Scientific Instruments
www.ssi.shimadzu.com

Cryo-Reactor Cools without Dry Ice, Liquid Nitrogen, or Water



The Atlas cryo-reactor is a compact unit (16 cm wide) compatible with round-bottom flasks that can cool to temperatures as low as -80°C . It is suitable for chemical processes such as Grignard, diazotization, aldol reactions, ortho metalations, Friedel-Crafts acylations, Michael additions, and Birch reductions. The cooling technology and integrated tempera-

ture probe ensure accurate control of temperatures without the need for dry ice, liquid nitrogen, or water circulation. Clip-on adapters and a quick-latching mechanism enable 100-mL or 500-mL flasks to be exchanged quickly without any tools. The integrated magnetic stirrer provides stirring up to 1,200 rpm, and an optional automatic-aligning overhead stirrer provides up to 800 rpm. The system can be upgraded to include automated dosing, as well as pH monitoring and control.

Syrris
www.syrris.com

Automated SLE and SPE System Removes Bottlenecks



Biotope Extrahera is an automated system for supported liquid extraction (SLE) and solid-phase extraction (SPE) methods in both plate and column formats. The compact eight-channel design handles 96 or 48 fixed-well plates and 1-mL, 3-mL, or 6-mL columns. Fast and automated operation removes workflow bottlenecks; the system is capable of processing a 96-well plate, SPE method in less than 30 min. This higher throughput reduces the cost per sample of analysis and allows skilled analysts to conduct more-demanding tasks, such as data analysis. Automation also ensures consistent sample preparation to improve the accuracy and precision of results. An enclosed working area

reduces operator exposure to solvents and hazardous compounds.

Biotage
www.biotage.com

INSTRUMENTATION

Vibration Sensor Works with Mobile Devices



The ICPDigital dynamic accelerometer is a high-resolution, broad-frequency piezoelectric vibration sensor with integrated data acquisition and USB connectivity. Appropriate for both the test and industrial markets, it provides the utility of a precision piezoelectric accelerometer while acting as a high-fidelity tool. The device works directly with smartphones, tablets, and PCs to make accurate vibration measurements easily accessible. Users can select a third-party vibration analysis package or write their own applications in any programming environment that can access the audio input driver, such as MATLAB or LabVIEW. The instrumentation is contained within a laser-welded, ground-isolated, stainless steel casing for durability, portability, and reliability.

The Modal Shop, Inc.
www.digiducer.com

Handheld Measurement Device Can Log Data

The ALMEMO 2590-A handheld measurement instrument also has the ability to store information with data logger functionalities. It has an easy-to-understand menu system, two or four measuring inputs, internal

memory or external memory options, and connections for the manufacturer's range of sensors. The system automatically configures itself once it is connected to a sensor. Data are saved in the connector, which eliminates the need for additional programming. The device accommodates measuring rates of up to 10 measuring operations per second (mops) and over 65 standard measuring ranges. It can store 99 measured values, but the memory can be expanded with a 128 MB connector to store approximately 8 million measured values. Cold junction compensation, temperature compensation, and atmospheric pressure compensation are among the intelligent sensor readings available.

Clark Solutions

www.clarksol.com

Laser Platform Employs a Coaxial Beam



With a coaxial laser beam of multiple wavelengths, the XLS10MWH Multiwave Hybrid platform is capable of novel material processing. It combines the laser energy from a 9.3- μm or 10.6- μm carbon dioxide laser and a 1.06- μm fiber laser into a single beam. This configuration allows both wavelengths to work together to realize new processing capabilities. Both components of the beam can be independently controlled to produce the optimal beam for handling marking, engraving, or cutting applications of organics or inorganics. This system is suitable for use with numerous materi-

als, including reinforced polymers, composites, and nanocomposites.

Universal Laser Systems, Inc.

www.ulsinc.com

OPERATIONS AND MAINTENANCE

Adjustable-Frequency Drive Reduces Energy Consumption

The PowerXL DG1 adjustable-frequency drive helps plants to reduce the energy costs associated with traditional control methods, as well as to improve safety and support reliable operations. This general-purpose drive incorporates an energy control algorithm, extensive onboard industrial communication protocols, and built-in harmonic reduction. Applications that already incorporate adjustable-frequency drives can realize additional energy and emissions savings of up to 10% with this model. The modular design utilizes the latest generation of semiconductor technology to provide greater reliability and reduce maintenance time and costs.

Eaton

www.eaton.com

Double-Wall Tank Prevents Spills



With a design capacity of 8,850 gal of liquid, the IMT 8850 double-wall storage tank can accommodate two truckloads of material. It features a standard 24-in. hinged manway opening, as well as a secure secondary containment sized for more than 110% of the primary tank capacity to reduce the likelihood of a chemical release, without the expense of lined, concrete containment. A heavy top

sidewall and dome ensure the integrity of the tank by preventing dome collapse. This high-density crosslink resin tank is certified by NSF for chemical storage.

Assmann Corp.

www.assmann-usa.com

Magnetic Retriever Recovers Corrosion Coupons and Probes



Field service personnel will find retrieval of corrosion coupons and probes easier with the Magnetriever (MAG-6) — a lightweight, compact, nontelelescoping retrieval tool for high-pressure corrosion-monitoring systems. Its corrosion-resistant titanium construction makes it suitable for harsh environments. Other features of the simple, durable design include a pressure-retaining outer barrel, a moveable outer magnetic assembly, and an inner magnetic drive assembly with a socket adapter. Users can change the barrel to modify the length of the retriever. The standard model is 25 in. long and weighs approximately 50 lb. With fewer mechanical components and stationary internal seals, the MAG-6 is easy to maintain and operate even at high pressures. Each retriever kit comes with service tools and spare parts.

Rohrbach Cosasco

www.cosasco.com