

AALBORG INSTRUMENTS

TPU Tube Pumps

According to Aalborg, its new TPU tube pumps are ideally suited for liquids of low-to-medium viscosity. Chemically resistant tubing materials and new peristaltic pump head technology combine to meet the demands for reliable, long-term pump operation. Four stainless steel rollers (eight roller option is available) minimize pulsation and promote longer tube life.

The TPU's tube setup, changes, and replacements are considered quick and easy. Tubing inside diameters offered are 1/8", 3/16", 1/4", or 5/16", each with a 1/16" wall thickness. The size and material of the tubing chosen, as well as the selected fixed RPMs of the motor drive, determine the flow rate. Pumped fluid never touches the pump. Other design features include sturdy occlusion wall and back plate; self-priming; small footprint design; mountable in any direction; 115 or 230 V service; and fixed RPM AC gear motors.

More: www.aalborg.com

Model xV Multi-Gas Glass Tube Flow Meters

These new units feature unique rotatable scale drums for displaying flow rates of five routine gases (argon, carbon dioxide, helium, nitrogen, and oxygen), and eliminate the need for individual flow meters and calibrations for medium flow range measurements. Easy-to-read direct reading gradations showing dual SCFM and L/min markings reflect both metric and English systems. These heavy-walled, fluted borosilicate glass flow tubes with polycarbonate shields are assembled in brass or 316 stainless steel frames. Vertical in-line or panel mount models are available. Standard seals are Viton. Optional Buna-N, PTFE/Kalrez, and EPR seals are available.

More: www.aalborg.com

AGILENT AUTOMATION SOLUTIONS

Nested Disposable Tip Rack

A new low profile, 384-well format conductive rack enables nested disposable tips to be used on the Bravo Liquid-Handling Platform and Vertical Pipetting Station (formerly VPrep). The new ANSI standard format rack offers 300% space savings over a traditional tipbox, and offers the flexibility of top- or bottom-loading stack compatibility. A long skirt and lead-in features allow easy loading of additional nested tip racks for improved throughput and walk-away time. Racks provide the sturdiness required by automation equipment, and the 30- μ L tips are designed to provide exceptional liquid-handling performance. In addition, all tips are certified to be DNase and RNase free. Sterile and nonsterile versions are available.

More: www.velocity11.com

AJK ANALYTICAL

Capillary Boy

According to AJK Analytical, this new device can fill a glass capillary tube in less than 1 min, depending on the powder,

and is the first X-ray accessory out of the cooperation between HUBER Diffraktionstechnik and AJK Analytical Services.

More: www.ajk-analytical.com/cms-capillary-boy.html

AMS BIOTECHNOLOGY

Iso-Gold Rapid Mouse Monoclonal Isotyping Kits

According to AMSBIO, Iso-Gold is a rapid-format isotyping kit that reduces traditional ELISA protocol from a day-and-a-half procedure to a 5-min assay. It is a rapid lateral flow assay, with 10 ng/mL sensitivity that can be run on both tissue culture supernatant and mouse ascites fluid.

Unlike ELISA-based isotyping kits that require considerable sample preparation and kit development, Iso-Gold is very easy to use. In a single step, diluted antibody sample is simply added into the loading well of the cassette. In less than 5 min, the Iso-Gold kit provides a color readout of the mouse monoclonal antibody isotope (IgG1, IgG2a, IgG2b, IgG3, IgA, or IgM). The test is also available with kappa and lambda light chains determination. Iso-Gold kits have been proven stable at room temperature for more than 1 year, and the assay does not cross react with fetal bovine serum.

More: www.amsbio.com/datasheets/ISOT-001.pdf

Cellufine Prepacked Mini-Columns

Cellufine is a novel, high-performance liquid chromatography media optimized for the purification of proteins, enzymes, endotoxins, and other biomolecules. Manufactured from spherical cellulose particles in an ISO 9001 (2000) approved production facility, Cellufine offers excellent chemical stability, high mechanical strength, and complete biocompatibility. Available in a range of prepacked 1-mL columns for ion exchange, affinity, and hydrophobic interaction, Cellufine Mini-Columns offer an optimized solution for initial screening of biomolecules, preoptimization of protocols in drug discovery, and preclinical applications.

More: www.amsbio.com

Phospho-Specific Polyclonal Antibodies

Milligram quantities of highly purified phospho-specific polyclonal antibodies are available from AMSBIO custom designed for optimal recognition of specific phosphorylation sites on the protein of interest.

More: www.amsbio.com

Proteoglycan Research Kits

According to amsbio, its new sandwich ELISA kit measures keratan sulfate (KS) at levels previously undetectable. The new kit offers 10 \times the sensitivity of previous ELISA kits (down to 0.25 ng/mL) enabling measurement of KS in various animal samples, including serum and synovial fluid, where KS is present only at trace levels. Based upon a competitive protein binding inhibition method, another new assay kit from amsbio offers sensitive and highly specific measurement of Hyaluronic acid in body fluids, culture

medium, and tissue extracts. In addition, amsbio now offers two new nonradioactive assay kits that offer sensitive and specific quantitative detection of heparanase in cell-culture supernatants, human plasma, biological fluids, and tissue samples. Supplied in a convenient 96-well plate format the kits are fast and easy to use.

More: www.amsbio.com/feature_Glycobiology.aspx

BECKMAN COULTER

XL-A/XL-I Analytical Ultracentrifuges

According to Beckman Coulter, newly designed centerpieces in its XL-A and XL-I instruments (the only analytical ultracentrifuges [AUCs] on the market today) allow the systems to provide precise, repeatable measurement of pharmaceutical sample aggregation in pharmaceutical research, and formulation laboratories.

Beckman Coulter initially developed the new centerpieces for researchers at a leading biotechnology company who wanted to use AUCs in processes that required greater run-to-run reproducibility. The work resulted in enhancements to the carbon epon (epoxy) and aluminum epon centerpieces that improve the systems' protein aggregation measuring capability by increasing precision and accuracy from test to test.

More: www.beckmancoulter.com

BioFocus DPI

SoftFocus Libraries

Six new biologically targeted libraries that contain novel, drug-like compounds that specifically target ion channels, kinases, and proteases are now available from BioFocus DPI. The new SoftFocus ion channel library is designed using BioFocus DPI's Helical Domain Recognition Analysis (HDRA) approach, which links X-ray, sequence alignment, and SAR data. HDRA is used to rationalize scaffold binding in the pore regions of ion channels and to guide monomer selection. According to BioFocus DPI, SoftFocus ion channel libraries have a track record of delivering potent and selective compound series against a variety of ion channel drug targets.

Four new SoftFocus kinase libraries (SFK54, SFK55, SFK56, and SFK57) target hinge, DFG-out and novel binding modes. The SFK collection has been independently determined to have the greatest population of kinase-like molecules available for screening.

The new SoftFocus protease library targets cysteine and serine proteases and is designed using a new technique based on structures of more than 50 protease–ligand complexes available from the Protein Data Bank, providing a potentially widely applicable protease scaffold template.

More: www.biofocusdpi.com

High-Throughput Screening Library

A total of 350,000 new compounds were selected to complement BioFocus DPI's existing diverse screening library, increasing its high-throughput screening platform to more than 900,000 unique compounds. According to

BioFocus DPI, by applying stringent lead-likeness criteria in its selection process, the company has enhanced the quality and diversity of its high-throughput screening library, offering a broader chemical space for customers' hit finding campaigns.

More: www.biofocusdpi.com

BioTEK INSTRUMENTS

ELx405 Magnetic Bead Washer

Developed in conjunction with companies in genotyping, gene expression, and protein assays that are built upon Luminex Corporation's xMAP platform, the ELx405 Magnetic Bead Washer offers high-strength biomagnetic separation in both 384-well and 96-well microplates. According to BioTek, rapid separation of micrometer- and nanometer-scale magnetic beads is now possible in full microplate format for faster wash cycles, and a high-energy neodymium iron boron magnet provides superior retention for rapid and uniform separation in each microplate well. Additionally, the specialized magnet may be removed to accommodate other microplate-based assay protocols.

More: www.biotek.com

CHEMSW

SI Live

ChemSW's new Site Inspection *Live* (SI *Live*) solution enables users to perform electronic mobile inspections using a Windows handheld device. A mobile electronic field inspection tool, SI *Live* is designed to simplify and expedite the capture of maintenance and safety inspection data. Automated wizards and forms walk users through template development and inspection processes. As a Web-delivered Software as a Service solution, SI *Live* replaces large upfront costs with periodic all-in-one subscription payments.

More: www.chemsw.com/siteinspection.htm

CHIMERA BIOTEC

Case Study: High Sensitive Detection of Follistatin by Imperacer—An Initial Study on the Way to Analytical Gene-Doping Tests

In a new white paper, Chimera Biotec describes the development of a high sensitive assay for follistatin based on its Imperacer technology. The quantification limit in human serum was found at 60 pg/mL in only 6- μ L sample volume.

More: www.chimera-biotec.com/en/applications/literature/whitepapers.jsp

CLINICAL AND LABORATORY STANDARDS INSTITUTE

Laboratory Instrument Implementation, Verification, and Maintenance; Approved Guideline (GP31-A)

GP31 is the successor to the *Laboratory Instrument Evaluation, Verification, and Maintenance Manual*, developed by the College of American Pathologists (CAP). Working with CAP, CLSI published GP31-A as an addition to the portfolio of standards and guidelines for laboratory

quality. Information is provided in an easy-to-use format for assessing instrument performance and function from the time of instrument purchase through the routine performance of clinical testing. Recommendations are included for achieving accurate, precise, and high-quality data for patient care at a reasonable cost.

GP31-A offers guidance on centrifuges, dilutors, analyzers, and many other kinds of devices, and includes recommendations on environmental evaluation, manufacturer relationships, initial verification of functionality, and ongoing operational assessment.

More: <http://www.clsi.org>

EXCELLGENE

OrbShake Bioreactor

According to ExcellGene, its new 250-L OrbShake bioreactor relies on orbital shaking principles for mixing compared to stirring or wave-like movements to achieve a superior oxygen transfer while minimizing shear forces. The combination of orbital shaking with disposable technology allows fast and economical production of gram quantities of protein for preclinical testing and Phase I studies under current Good Manufacturing Practice (cGMP) and non-cGMP conditions. The OrbShake bioreactors were developed jointly with Sartorius Stedim Biotech and Adolf Kühner, and ExcellGene is the first company to offer production of recombinant proteins at the 50–200-L scale in OrbShake bioreactors.

More: www.excellgene.com

EXETER ANALYTICAL

Technical Report: Factors Affecting CHN Microanalyser Performance

A technical report from Exeter Analytical examines the consequences of different commercial CHN microanalyser designs when the instruments are run in real laboratory environments, and concludes that using a horizontal furnace design CHN microanalyser, such as the Exeter Analytical Model 440, allows analysts to routinely and simply produce accurate and precise data on wide ranging sample types without system reoptimization.

Data show the impact of horizontal versus vertical combustion systems. In a horizontal furnace arrangement, the sample is introduced into the combustion tube on a quartz ladle, which critically enables the removal of all sample residues after combustion. In a vertical furnace arrangement, the samples are combusted on top of previously combusted samples. This difference is a major factor contributing to the advantages of a static system with a horizontal furnace over both the dynamic and hybrid designs. This build-up of sample residue in the combustion zone of vertical furnace systems is shown to considerably increase the potential for poor analytical data.

Test data from an independent multilaboratory study demonstrates not only the superior accuracy and precision

routinely achievable, but also how the inherently longer term stability with a horizontal furnace design markedly decreases time lost due to the need for recalibrations and sample reruns. Considerable variance in instrument performance can also be seen with more demanding samples. The advantages of a horizontal furnace design CHN microanalyser is illustrated with applications including time-dependent combustible samples and volatile liquids.

More: www.eal.com

Application Note: CHN Analysis of Environmental Filter Samples

Application note 210 from Exeter Analytical describes direct determination of total carbon, hydrogen, and nitrogen in environmental air and water filter samples. The optimized methodology, using an Exeter Analytical Model CE440 CHN elemental analyzer, requires a minimum of sample preparation and may be used for single samples or automated for higher throughput environments. The Model CE440 is a static combustion system, with a horizontal furnace design that enables easy removal of filter and sample ash between each analysis. Consequently, one combustion tube will analyze in excess of 1000 samples without the need for removal and cleaning.

More: sales@eal.com

Linear Regression Plus Software Algorithm

According to Exeter Analytical, Linear Regression Plus is designed for use with its Model 440 Elemental Analyser, and adds unmatched accuracy in the determination of the nitrogen content of combustible samples. Linear Regression Plus is available as standard on all new Model 440 Elemental Analysers, or as a free-of-charge upgrade to existing users of Model 440 Windows-based software.

More: www.eal.com

FEI COMPANY

Phenom Remote Assistant

This new service enhancement allows remote tracking, diagnostics, and repair of Phenom personal scanning electron microscope (SEM) systems. The Phenom Remote Assistant is powered by FEI's Remote Access Program for Interactive Diagnostics, which provides a highly secure, encrypted, virtual private network connection between the customer and FEI service engineers. All remote connections are initiated from the Phenom side, so users are always in complete control. The Phenom Remote Assistant is available at no additional charge with all Phenom personal SEMs.

More: www.phenom-world.com

FLUID METERING

Smooth-flo PDS100 System

The Smooth-flo is a valveless dispensing and metering system that uses dual fluid metering pumps precisely synchronized to eliminate pulsation typically present in other piston pump designs.

Pump heads are integrally mounted to the control unit, which includes stepper motors, drivers, and programmable electronics housed in a rugged anodized aluminum enclosure suitable for wall mounting or benchtop installation. The Smooth-flo is intuitive, menu-driven, and uses convenient front-panel membrane switches and a large LCD display for programming. It features Pulse-Free fluid delivery down to 15 $\mu\text{L}/\text{min}$ continuous flow. The precision dual stepper-controlled pump heads are factory calibrated to the user's flow range. The Smooth-flo PDS100 System offers RS485, 4–20 mA, 0–5 V, and 0–10 V electronic control interface for connection to process sensors, PLC, and PC control systems, respectively.

More: www.fmipump.com

G.E. HEALTHCARE

IN Cell Analyzer 2000

According to G.E. Healthcare, its new IN Cell Analyzer 2000 is a flexible cell imaging system for high-content analysis with excellent image quality, speed, and ease of use for all screening and research needs. The flexibility of the system is designed to enable scientists to perform a wide variety of previously challenging experiments with a single instrument—from investigative microscopy through to automated screening; and imaging of organelles, cells, tissues, and whole organisms.

New enabling features include rapid preview scanning of a selected area of a sample at any available magnification before starting an acquisition run; high-performance large chip CCD camera coupled with a widefield illumination source that is twice as bright as a conventional xenon lamp, ensuring more statistically robust results in a single pass; whole-well imaging to capture an entire well in a single image, enhancing the ability to image rare events; wide range of objectives (2 \times –100 \times) to suit a variety of sensitivity requirements; six imaging restoration modes to ensure high-quality images and accurate data with any sample type; fast image acquisition from slides using Preview scan and a new intuitive graphical user interface; and a manual microscope mode allowing settings to be adjusted and effects assessed in real time.

More: www.gehealthcare.com/incell

IN Cell Investigator v1.5 Software

According to G.E., this latest addition to its Investigator range of image analysis tools for automated high-content analysis of live and fixed cells builds on over 50 validated applications, and facilitates these new features: whole-well analysis (the generation of a panoramic image through image stitching of overlapping images enables the analysis of whole wells, larger cell populations, and model organisms); texture analysis (for deeper insight into results, particularly for toxicology and cell cycle); 3D-angiogenic tubules formation analysis; de-clumping of heavily clustered colonies and populations containing binucleated cells, providing greater insight into stem cell colony analysis; and cell feature tracking to get a temporal perspective of cellular processes.

More: www.gelifesciences.com/incell

ÄKTAmicro Liquid Chromatography System

Specifically designed for small sample volumes and concentrations, the new ÄKTAmicro Liquid Chromatography System delivers reproducible high-resolution purification and enables characterization of target molecules. It is a completely bioinert system that includes a Microfraction Collection Kit for collection of minute fraction volumes, an adapted UNICORN wizard control system, an optional degasser, and the ability to connect to light scattering detectors. According to G.E., the system is also well suited for rapid purity/recovery analysis in method development and drug discovery, and offers great application flexibility, including reversed phase and ion exchange chromatography techniques, as well as gel filtration (size-exclusion chromatography).

More: www.gehealthcare.com

HiScreen Prepacked Chromatography Columns

Six new columns, each prepacked with BioProcess chromatography media, extend G.E.'s range of HiScreen prepacked chromatography columns in this format to 19. The new columns include IMAC Sepharose 6 Fast Flow for immobilized metal ion affinity chromatography medium for purifying proteins with an affinity for metal ions, including histidine-tagged proteins; Q Sepharose Fast Flow for ion exchange chromatography medium, strong anion exchanger; SP Sepharose Fast Flow for ion exchange chromatography medium, strong cation exchanger; Q Sepharose High Performance for ion exchange chromatography medium, strong anion exchanger, with small bead size resulting in high resolution and sharp peaks; SP Sepharose High Performance for ion exchange chromatography medium, strong cation exchanger, with small bead size resulting in high resolution and sharp peaks; and Phenyl Sepharose High Performance for hydrophobic interaction chromatography medium, with small bead size resulting in high resolution and sharp peaks.

According to G.E., HiScreen columns' 10 cm bed height is ideal for method optimization and parameter screening (e.g., for selectivity and capacity), and the columns are easily connected in series to give a 20 cm bed height. HiScreen columns have a small bed volume (4.7 mL). HiScreen columns are compatible with peristaltic pumps and chromatography systems such as ÄKTA design. In addition, the columns are made of biocompatible polypropylene that does not interact with biomolecules.

More: www.gehealthcare.com

Facility Validation Services

GE Healthcare Facility Validation Services is a new global service that provides customers with more efficient and comprehensive international regulatory compliance for their facilities and manufacturing systems compared with complex traditional approaches. Applicable to any new or existing facility, GE Healthcare Facility Validation Services uses a unique Modular Validation Platform to work with

customers as they plan and design their facilities and manufacturing processes. GE Healthcare Facility Validation Services uses the company's project and business management expertise, as well as operational excellence methodologies such as Lean and Six Sigma, to provide a world-class integrated global service.

More: www.gelifesciences.com/validation

HiTrap and SpinTrap Albumin and IgG Depletion Prepacked Columns

For the depletion of albumin and IgG from human serum and plasma, these two new columns have high depletion capacity (removing >95% albumin and >90% IgG), and can achieve high reproducibility. Separations are simple and fast, taking approximately 35 min to complete with the HiTrap column, for larger sample volumes (~150 μ L), and approximately 10 min with the SpinTrap column, for smaller sample volumes (~50 μ L). In addition, the HiTrap column may be used for a limited number of repeat runs, with consistent depletion rates.

The columns are prepacked with a mixture of anti-HSA Sepharose High Performance and Protein G Sepharose High Performance, in a medium consisting of highly cross-linked agarose beads with covalently immobilized affinity ligands. Samples are processed through the HiTrap column using a liquid chromatography system (e.g., ÄKTA), peristaltic pump, or manually using a syringe, and through the SpinTrap column using a tabletop centrifuge.

More: www.gelifesciences.com

GENE TECHNOLOGIES

G-Storm GS-482 Thermal Cycler

According to Gene Technologies, this latest addition to its G-Storm range of thermal cyclers is the first to offer dual block functionality for under Euros 5000. The dual block is actually two independent 48-well peltier thermal blocks. Both have sprung heated lids that are able to adapt to 0.2-mL tubes and strips, as well as high-profile 48-well plates to enable it to run two programs either independently or simultaneously. In addition, the GS482 has the ability to run gradient programs on either both or individual thermal blocks as a standard feature.

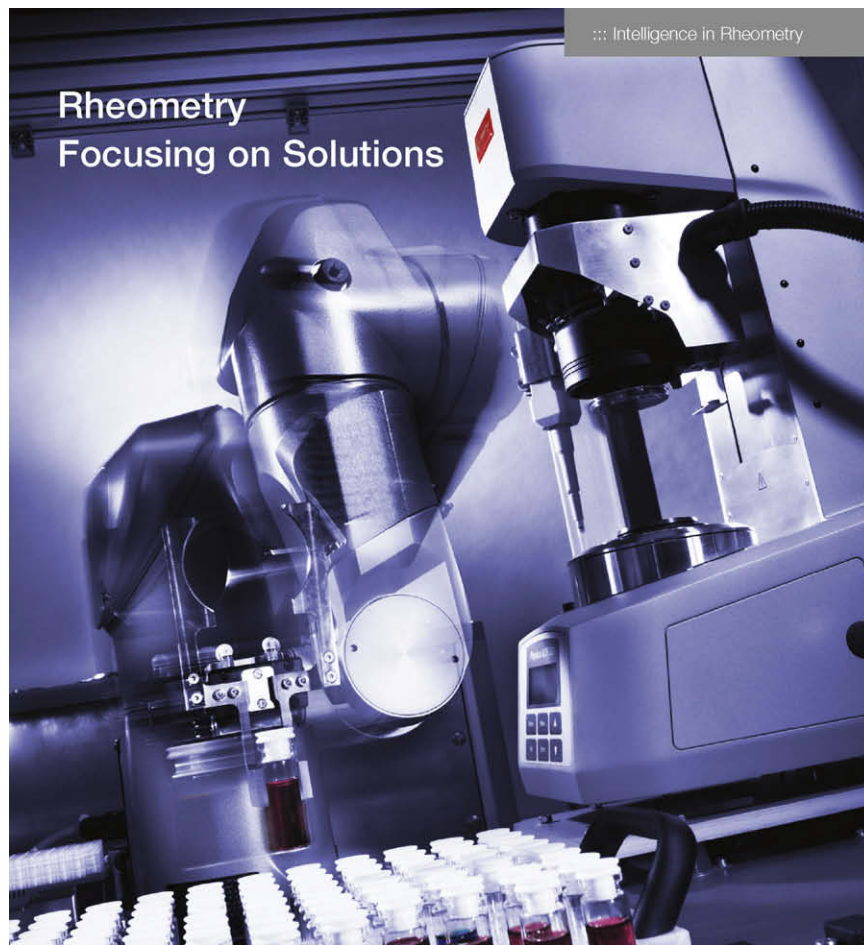
The GS482 uses Windows CE as its operating platform with a 3.5" color touch screen to control the onboard, icon driven software. Users have the choice to enter

programs manually or use the built-in Program Wizard.
More: www.g-stormcyclers.com

GENEVAC

Technical Study: Improved HPLC Fraction Pooling Workflow

Genevac has a technical study that illustrates how its SampleGenie's ability to automatically pool (without robotics) multiple HPLC fractions into a single small sample



Fully automated, robotically operated:
The HTR High Throughput Rheometer
from Anton Paar.

- Automatic sample filling and cleaning of measuring systems
- Processes up to 96 samples in a single run up to 24 hours
- Modular setup, flexible to individual applications
- All standard MCR 301 test types, configurations and accessories apply

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www.anton-paar.com

vial simplifies HPLC fraction pooling protocol to a single overnight drying step before storage and analysis. SampleGenie enables samples in Genevac ROCKET, EZ-2, or HT-series centrifugal evaporators to be concentrated, dried, or fast freeze dried directly into a single vial, eliminating the need for reformatting of samples after drying. SampleGenie flasks act like a funnel and permit multiple large volume samples to be concentrated directly into an HPLC (or GC) autosampler vial. SampleGenie is available to cope with most solvent types.

More: www.genevac.org

Technical Study: Weighable Sample Prep from Difficult-to-Dry HPLC Purification Fractions

According to Genevac, it has developed an effective fast lyophilization technique for preparing weighable samples from difficult-to-dry HPLC purification fractions. Using a Genevac HT-Series evaporator and proprietary LyoSpeed technology, HPLC fractions can be concentrated to a few milliliters and then frozen and rapidly lyophilized to produce a diffuse dry powder, which can easily be redissolved or weighed out.

More: www.genevac.org/en/ArticleDetail.asp?S=6&V=1&ProductDownload=83

GREINER BIO-ONE

Datamatrix Coding Service for Cryo.s Freezing Vials

A laser is used to burn two-dimensional barcodes, known as Datamatrix codes, into the plastic base of vials. The small white symbols on a black background have a high data capacity and can be used to save and process sample-related information on the origin, type, and age of a sample. The customized universal sequence of characters or fixed codes can be read using any standard 2D barcode scanner and integrated with the relevant sample data. Each sample is therefore given a unique, machine-readable identity. The codes offer a high level of data reliability as they are resistant to mechanical stress, low storage temperatures, and most solvents. In addition, an automatic error-correction algorithm, which also makes partly damaged codes readable, ensures all information can be accessed at any time.

More: www.greinerbioone.com

CELLview

According to Greiner, its new CELLview product family for high-resolution microscopic cell-culture applications combines the convenience of a standard plastic cell-culture dish with the high optical quality of a glass bottom to facilitate high-resolution microscopic imaging of in vitro cultivated cells.

Although conventional plastic cell culture dishes are not suitable for complex imaging applications such as fluorescence microscopy, the autofluorescence-free glass bottom of the CELLview cell culture dish ensures

maximum spectral transmission and prevents depolarization of light.

More: www.greinerbioone.com

HAMILTON COMPANY

MICROLAB NIMBUS

Hamilton Robotics announced the expansion of its MICROLAB NIMBUS platform with third-party device integration capabilities. NIMBUS is a compact, flexible, automated 96-channel pipetting workstation that fits on the benchtop and in many fume hoods. New communications software enhancements enable the integration of NIMBUS hardware with a select range of third-party devices such as plate readers and washers, shakers, thermocyclers, and plate storage stations. The NIMBUS software now contains a library of protocols and drivers that work with the system's gripper arm to move plates off the deck to other devices and then back again.

More: www.hamiltonrobotics.com

C-Line Syringe

This new family of durable syringes specially designed for optimal performance and long life when used with autosamplers from CTC Analytics incorporates several unique design features that ensure superior performance. The cemented needle design eliminates contact and potentially damaging interaction between the sample solvent and adhesive. The syringe's adjustable plunger protects the polymer tip and minimizes wear. Models are available for all CTC PAL LC and GC autosamplers. The C-Line syringes are available in all volumes, from 5 to 1000 μL .

More: www.hamiltoncompany.com

asmServerST Active Sample Management System

New from Hamilton Storage Technologies, the asmServerST active sample management system integrates Hamilton's SealTite technology for automatic microplate lidding and unlidding. SealTite features unique stainless steel lids that form a liquid-tight seal, eliminating the risk of contamination that can occur with traditional foil or adhesive seals. Considered ideal for high-throughput screening labs in drug discovery research, the asmServerST provides a complete, integrated solution for compound management and storage at temperatures from ambient to $-20\text{ }^{\circ}\text{C}$.

More: www.hamilton-storage.com

HAMILTON ROBOTICS AND PROMEGA

Automation of CellTiter-Glo Luminescent Cell Viability Assay on Hamilton's MICROLAB STAR Liquid-Handling Workstation

An automated, tested, and verified protocol for the fast and accurate dispensing of the Promega reagent in microplate format is now available. The Hamilton STAR 8-channel platform, with its air displacement pipetting technology, performs precise dispensing of the CellTiter-Glo reagent in

96- or 384-well plate formats, and can process multiple plates per day for high-throughput labs. An integrated shaker effectively disrupts cells at 400 rpm in 96-well plate format.

More: www.hamiltonrobotics.com

HARVARD APPARATUS

Nanomite Syringe Pump

According to Harvard Apparatus, the high pressure, micro reactor delivery of its new Nanomite Syringe Pump is ideal for cellular injection, chamber dosing, micro-dispensing, and stereotaxic applications. It features a bright display; easy-to-use interface; and two modes of operation, constant flow, or volume dispense mode. The enhanced micro-stepping pump profiles deliver very smooth and consistent flow that is virtually pulse free, and the pump's nonvolatile memory remembers its last syringe size, flow rate, and configuration.

More: www.harvardapparatus.com

PHD ULTRA Syringe Pump

According to Harvard Apparatus, its new PHD ULTRA provides maximum versatility for configurations and applications. It can handle flow rates from picoliter to 220 mL/min with the highest accuracy, precision, and smoothness of flow. This pump can be stood on end to maximize performance for certain applications, and the screen turns with the pump to always be readable. Models are available in infusion only, infuse/withdraw, programmable, and push-pull. Multiple syringe holders can accommodate 2–10 syringes for multichannels or larger reservoir capacities. Both standard and remote models are available. Remote modes have the pumping mechanism up to 30 ft away from the control unit.

More: www.harvardapparatus.com

INTEGRA BIOSCIENCES

Application Note: Streamlining Cell-Culture Liquid Handling

A new application note from INTEGRA Biosciences describes the implementation, within a life science organization, of a new liquid-handling set developed to support safe, streamlined and organized work when pipetting and aspirating cell-culture media.

More: www.integra-biosciences.com/liquid_handling_set_1_e.html

Liquid-Handling Set

To keep cell-culture work streamlined and organized when pipetting and aspirating liquids, a new liquid-handling set from INTEGRA includes a PIPETBOY pipetting aid for accurately transferring media and buffers with serological pipettes, a VACUBOY hand operator for efficient vacuum removal of media and cell-culture supernatants, and

a VACUSAFE comfort all-in-one aspiration system for ensuring safe handling and containment of liquids.

More: www.integra-biosciences.com

INVITRIA

ZAP-CHO

According to InVitria, its new ZAP-CHO media component for Chinese hamster ovary (CHO) cell culture enhances performance of mammalian cell culture, including improved cell growth and antibody production. It achieves these performance advantages in chemically defined media that are completely free of animal components. Previously, the performance seen with ZAP-CHO was only possible by using animal components such as fetal bovine serum, bovine serum albumin, or plasma-derived human serum albumin in cell-culture media.

More: www.invitria.com

LAB901

ScreenTape P200

Generating results in only 1 min per sample, the P200 protein system extends the use of Lab901's existing benchtop TapeStation instrument for PCR diagnostics. Used with the TapeStation, ScreenTape P200 combines gel loading, electrophoresis, imaging, and analysis. Results include a gel image, electropherogram, molecular weight determination, and % purity—all generated in 60 s per sample. There is no need to prime chips, stain/destain gels, image gels, or annotate gel images when using the ScreenTape System. ScreenTape can run just a few samples, leaving unused lanes available for future experiments, and reducing the waste commonly encountered with chip-based systems and precast gels.

More: www.lab901.com

ScreenTape R6K

ScreenTape R6K extends the use of Lab901's existing benchtop TapeStation instrument by enabling rapid RNA sample quality control (RNA QC), and generating results in as little as 1 min per sample. It is considered a next-generation platform for RNA QC that automatically delivers an objective quality metric for total RNA—the ScreenTape degradation value—before experiments such as DNA microarray and qRT-PCR.

More: www.lab901.com

LONZA

WinKQCL 4 Software

According to Lonza, this new version of its 21 CFR Part 11 compliant endotoxin detection software offers interactive trending tools to provide actionable results on demand to assist in the detection of drift and enable proactive decisions. Flexible, user-friendly interfaces allow customized templates using the SpeedFill and Drag-n-Drop features.

More: www.lonza.com/evolution

MALVERN INSTRUMENTS

Web Seminars: NIRCI

Now available on demand and at no charge are two new collaborative presentations that illustrate the growing use of near infrared chemical imaging (NIRCI) technology in areas such as formulation design and anticounterfeiting. The first is entitled “Utilization of chemical imaging during formulation design—Identification of critical quality attributes,” and is authored by Dr H. Tian of Roche. The second is entitled “Investigation into Classification/Sourcing of Suspect Counterfeit Heptodin Tablets by Near Infrared Chemical Imaging,” and is authored by Dr Jean-Claude Wolff of GlaxoSmithKline.

More: www.malvern.com/LabEng/support/events/events.htm

Zetasizer APS

According to Malvern, its new Zetasizer APS (Auto Plate Sampler) dynamic light scattering system delivers fully automated measurement of protein size, and handles 96- or 384-well microplates, transferring the sample to a closely controlled environment for robust size characterization. Measurements within this defined environment provide the accuracy and temperature stability needed to deliver consistent, reliable results. The resulting data precision gives access to more applications, particularly those requiring the detection of small amounts of aggregates or the early onset of aggregation.

The Zetasizer APS automatically extracts a sample directly from its well and then measures it within an enclosed measurement area that operates in the range 2–90 °C, controlled to 0.1 °C. Dual temperature controls maintain optimal conditions within the wellplate to preserve sample integrity, and separately within the measurement chamber. Each sample on a plate can be measured using a different protocol and each is preserved for further investigation. Melting point measurements can be carried out on individual samples, each using a different range of temperatures, without affecting the other samples in the plate.

More: www.malvern.com/malvern/ondemand.nsf/id/SREL-7S9KAM

METTLER TOLEDO

F-A747 Filter Robot

According to Mettler Toledo, its new F-A747 Filter Robot is the first automated filter weighing solution, and this measurement system for particulate matter (PM) is specifically aimed to meet the requirements of the automotive industry. The new F-A747 Filter Robot allows fast and accurate determination of particulate matter with an accuracy as little as 0.1 µg and will be used by Land Rover to determine the amount of PM expelled by vehicle engines, especially diesel.

More: <http://us.mt.com>

MICRONIC EUROPE

SampleScan Wireless Barcode Scanner

Weighing only 255 g, the SampleScan Wireless Scanner combines lightweight handheld operation with the ability to read a wide range of high and low density coding symbologies, including damaged and poorly printed codes. The new SampleScan Scanner transmits information from scans to a computer wirelessly using Bluetooth communication, and allows scanning in multiple locations. Durably constructed, with no moving parts, the SampleScan Wireless Scanner's high capacity lithium ion battery allows c.16 h of consistent use between recharging operations.

More: www.micronic.com

PARAYTEC

Application Note: Testing Biocatalyst Substrate Specificity

Applications note AN002 describes how the ActiPix D-100 UV Area Imaging detector provides a novel technique for testing biocatalyst substrate specificity toward a mixture of UV active compounds using a continuous engagement electrophoretically mediated microanalysis (EMMA) assay method.

In the described application, a plug of the substrates is injected into a fused silica capillary column containing the background electrolyte and dissolved enzyme. Using a capillary electrophoresis instrument with the ActiPix D-100, the components are seen to be separated in the initial part of the run, avoiding competitive binding and inhibition problems that occur in standard enzyme assays.

Experimental data demonstrates how the EMMA assay using the ActiPix and a silica capillary with three loops uniquely enables multicomponent substrate specificity analysis for the tyramine oxidase enzyme. The peaks corresponding to each of the separated components are measured at multiple time points along the looped capillary, providing intrinsic self-referencing and enabling ready identification of tyramine and 2-phenylethylamine as the only reactive components. The new method provides a quick, easily integrated technique for assessing enzyme-substrate specificity using a multicomponent mixture of substrates and had the potential to be broadly applicable to other UV active compounds. The method requires minimal amounts of reagent, making it perfectly suited for evaluating enzyme specificity even if only nanoliter amounts of enzyme are available.

More: www.paraytec.com/downloads

PERKINELMER

EcoAnalytix Analytical Platforms for Biodiesel and Bioethanol Labs

PerkinElmer has expanded its solutions portfolio to include nine analyzers and systems, crossing six technologies: ICP-optical emission spectroscopy (ICP-OES), gas chromatography (GC), liquid chromatography, infrared

(IR), differential scanning calorimetry (DSC), and liquid scintillation counters (LSC).

Now available is the fatty acid methyl esters system based on the Clarus GC for determining fuel composition, oxidation stability system based on the DSC 8500 for determining the oxidation status of biofuel, and the ¹⁴C LSC system for determining the fuel blend. A full suite of systems for testing bioethanol, a sugar-based fuel made from such crops as sugarcane, corn, or wheat, is also available. This line consists of an EcoAnalytix Trace Metals Analyzer based on the Optima 7000 ICP-OES for testing Group I and Group II metals and phosphorus, Alcohol system for determining the right blend of ethanol in gasoline by GC, and Bioethanol Fermentation HPLC system for monitoring fermentation broth. The ¹⁴C determination by LSC system available for biodiesel can also be used in qualifying bioethanol.

Both the biodiesel and bioethanol platforms also include PerkinElmer's LABWORKS greenLIMS, a preconfigured software application specifically for the biodiesel industry, as well as consumables, application notes, methods, standard operating procedures, and on-site training.

More: www.perkinelmer.com/biofuels.

PBL INTERFERONSOURCE

VeriKine Cynomolgus/Rhesus Interferon-Alpha Serum ELISA Kit

For determining macaque IFN-Alpha levels, this new high-sensitivity assay enables interferon quantification in Cynomolgus and Rhesus Macaque model systems for viral disease, autoimmune disorders, and immunotoxicology. According to PBL, VeriKine Cynomolgus/Rhesus IFN-Alpha Serum ELISA kit has superb matrix compatibility. It is sensitive to 25 pg/mL, and can detect the protein in a wide variety of sample matrices and test concentrations with an accuracy of $\pm 20\%$, the expected values in small or large sample sets. The kit performs just as well in Rhesus and Cynomolgus serum and plasma samples. The kit also detects the bioactive form of the Rhesus/Cynomolgus IFN-Alpha 2 protein suggesting that research can be expedited by minimizing the number of samples to be analyzed in bioassays.

More: www.interferonsource.com

PEPPERL + FUCHS

FieldConnex High-Density Power Hub

Low heat dissipation and a small footprint are a must for installation inside the control room cabinet. According to Pepperl + Fuchs, the new version of its FieldConnex high-density power hub increases available power supply current from 360 to 500 mA while maintaining space requirements. This highly compact power supply can deliver 500 mA for up to four fieldbus segments.

More: www.am.pepperl-fuchs.com

PORVAIR SCIENCES

PCR Plates

A new range of 11 high-quality polymerase chain reaction (PCR) plates from Porvair is manufactured from ultra clean medical grade polymer under Class 10,000 clean room conditions, and is designed to fit most thermocyclers and sequencers. The plates are certified free of pyrogens as well as DNase and RNase enzyme activity. High sample integrity is ensured through use of solvent resistant polymers to minimize leachates, and a well design where the liquid meniscus comes below the plate surface to eliminate sample carryover problems when using a plate lid.

More: www.porvair-sciences.com

QIAGEN

QuantiFast Multiplex RT-PCR Kits and Rotor-Gene Multiplex RT-PCR Kits

According to Qiagen, its new QuantiFast Kits are the first to market in fast multiplex real-time RT-PCR without requiring optimization on both standard and fast real-time cyclers for one-step applications. The Rotor-Gene Kit allows detection of up to four targets per tube and includes optimized protocols for highly precise results on the Rotor-Gene Q.

More: www.qiagen.com

AllStars Control siRNA

According to Qiagen, its new AllStars Control siRNA enables easy transfection optimization with phenotypic control siRNA in virtually all mouse and rat cell types.

More: www.qiagen.com/GeneGlobe

PreAnalytiX PAXgene Blood miRNA Kit

According to QIAGEN, the PAXgene Blood RNA System for collection and stabilization of human whole blood inhibits RNA degradation and gene induction in vitro, resulting in preservation of the gene expression profile. However, extraction and purification of the miRNA from these same samples is not easy. The PAXgene Blood miRNA Kit is a standardized method for co-purification of RNA and miRNA from human blood samples.

PAXgene Blood RNA tubes used in combination with the new PAXgene Blood miRNA kit comprise the first system available for collecting and stabilizing whole human blood, and co-purifying total RNA enriched for miRNA. PAXgene Blood miRNA protocols are available for both manual and automated solutions. For increased efficiency in the lab, this research use only protocol can be automated on QIAGEN's QIAcube. Up to 12 samples can be processed in a single run using the QIAcube variant of the PAXgene Blood miRNA protocol. Additionally, the PAXgene Tissue System (launched in January 2009) is available for studies requiring histological and molecular analyses.

More: www.qiagen.com

EpiTect HRM PCR Kit

EpiGenetics researchers can now detect changes in methylation status in a real-time format using high-resolution melting (HRM) analysis, according to QIAGEN. The company's new EpiTect HRM PCR kit provides a master mix format for the detection of changes in the CpG methylation status of bisulfite converted DNA. The kit is designed to run on all real-time cyclers, including the Rotor-Gene Q, QIAGEN's real-time PCR cycler, which provides a highly specific melting curve.

More: www.qiagen.com/epigenetics

RADLEYS**Reactor-Ready Reaction System**

This new multivolume jacketed glass reaction station for labs involved with synthesis and process research and development is considered simple to use, quick to set-up, and incorporates a range of features to boost productivity. Reactor-Ready fix-once stirrer drive clamp fits all major brands of electric and air powered drives and ensures that the stirrer drive is always in the correct alignment. The novel stirrer support beam allows the drive to be easily lowered and raised without needing to reposition the fix-once stirrer drive clamp. A polytetrafluoroethylene (PTFE) stirrer guide provides excellent stirring and sealing performance. An extended stirrer shaft support ensures whip-free agitation.

Reactor Ready accommodates standard jacketed glass reaction vessels from 250 mL to 5 L. Precision ground and polished flat flanges with a PTFE-collared FEP-encapsulated O-ring seal ensures a superior sealing performance. Special flexible hoses that incorporate a quick connect coupling enable rapid exchange of vessels without the use of tools. Integral wide bore vessel-to-manifold hoses provide maximum heat transfer fluid flow rate and are insulated for optimum performance. All vessel-to-manifold hoses are supported by the frame to eliminate stress on the glassware. A drain-down venting stopcock on the return manifold allows quick and easy venting of the heat transfer fluid circuit during vessel changeover. Speedy drain-down can be achieved either by draining back to the circulator bath or directly from the Ready Reactor supply manifold drain point.

More: www.radleys.com

ROCHE INNOVATIS**Cedex HiRes**

The newest generation of image-based Cedex Cell Counter and Analyzer systems for automated cell-culture analysis, the Cedex HiRes measures cell density, viability, aggregation rate, cell morphology, and cell debris using the Trypan Blue exclusion method, with high-resolution digital image recognition. Designed to work in a production environment while strictly adhering to quality guidelines, Cedex HiRes uses software with

extensive capabilities for data management and control to ensure compliance with all current Good Manufacturing Practice regulations.

Upto 20 individual samples of 300 μ L each are handled by the multisampler. Cell staining and mixing tasks are fully automated, as are focus adjustments. Cedex HiRes produces images with pixel resolution of 0.8 μ m, enabling the distinction of objects with a distance of less than 2 μ m to each other. Detectable cell diameter range is 2–40 μ m, and object diameter range of 1–90 μ m. Digital image recognition allows for permanent storage of acquired data.

More: www.roche.com

SP INDUSTRIES**Online Library of Technical Articles**

A growing collection of free-to-download articles authored by experts in industry, universities, and at SP Industries offers technical information on a broad range of topics from introductory papers on basic freeze drying theory to advanced subjects such as freezing/annealing, primary drying endpoint determination, and thermal analysis (DSC). Also available are presentations from SP Industries LyoLearn webinar program.

More: www.spindustries.com/freeze-drying/index.jsp

FTS ThermoJet Temperature Cycling System

Enhanced data logging capabilities now enable the FTS ThermoJet temperature cycling system to be used for device characterization through advanced trending and data analysis. The new generation system also allows easy data transfer to a PC using a USB Memory Stick.

More: www.spindustries.com

STARNA SCIENTIFIC**19FL Ultra-Micro Cell**

To illustrate the benefits of the Starna Scientific's new Type 19FL ultra-micro cell, the company devised an experiment that used the 5 μ L cell to measure a solution of fluorescent dye from a yellow highlighter pen. A dilute solution of the pen's fluorescent dye was prepared and pipetted into a standard 1 cm square fluorescence cell. Prescan was used to determine the optimal wavelengths for excitation and emission. The wavelengths were then selected for the study. The Varian Cary Eclipse spectrofluorimeter was used to carry out the experiment. According to Starna, the typical Raman sensitivity (signal/noise) for water at 350 nm (ex) is approx 3500–4500. The optical configuration of the cell was suitably matched to the beam profile of the Cary Eclipse instrument thereby optimizing the available energy entering the sample being measured. The use of a collimation lens on the emission window, and mirror coating on opposed faces amplifies emission output to improve sensitivity. For the experiment, all measurements were made using the Varian Cary Eclipse Fluorimeter that was equipped with a standard cell holder and a Starna 19.05F/L/Q/5/Z20 5 μ L microcell. Conditions were

adjusted to provide a reasonable scale readout. Comparative quantitation was established by keeping the instrument conditions constant. To align the ultra-micro cell, a moderately bright fluorophore was installed in the standard cell holder and the software's Align module was used to seek an optimum signal by slowly adjusting the height and pitch of the cell. The correlation between the experiment's results shows that at the dilution levels used and with this specific cell alignment, there is no qualitative difference between the result quality (all data collected at the same scan speed). The scans show excellent correlation even though the absolute reading for the ultra-micro cell was less than 3 AFU. The cell was removed and realigned between these sets of readings and it was possible to achieve about 5% full volume sensitivity with more dilute samples.

More: www.starna.com

SYMYX TECHNOLOGIES

Application Note: Enterprise ELN's—the Future for Electronic Lab Notebooks

A new Symyx application note discusses why more and more organizations are demanding a single enterprise lab notebook that improves productivity, operational agility, and the ability to do more for less. A single notebook deployed across the enterprise can be used across multiple scientific disciplines, as well as across the entire R&D spectrum—from early discovery to late-phase development, and onto early manufacturing. By centrally and consistently capturing information scientific informatics, the paper describes how an enterprise ELN can foster workflow optimization, process consistency, collaboration, and improved productivity through knowledge sharing. The key importance for the enterprise ELN to support integration with wide ranging tools, workflows, laboratory apparatus, lab automation software, and data management systems is discussed.

More: www.symyx.com/bt95_instruments_appnote.pdf

Symyx Contract Development and Manufacturing Organization

The Symyx Contract Development and Manufacturing Organization was launched to help biopharmaceutical companies move promising drug candidates to clinical trials faster and more reliably with integrated formulation development, and preclinical and current Good Manufacturing Practice fill/finish manufacturing.

More: www.symyx.com/CDMO

Symyx ISENTRIS Personal Edition Software

Designed for small to mid-size R&D organizations and for individuals, ISENTRIS Personal Edition offers advanced scientific information management, exploration, and sharing capabilities without requiring enterprise deployment. As the successor to the ISIS desktop system (replacing ISIS/Base, ISIS for Excel, and ISIS/Draw), ISENTRIS Personal Edition surpasses ISIS for storing, searching, viewing, and sharing personal experimental results while still providing the

powerful functionality of an enterprise scientific informatics system. ISENTRIS Personal Edition includes Symyx ISENTRIS, Symyx Draw, and ISENTRIS for Excel. Advanced enumeration of virtual compound libraries, analysis of the effects of substituents on biological activities, and search for chemical spreadsheets using structure searching and filtering techniques.

More: www.symyx.com/promos/isentris-personal

SYRRIS

Atlas Autosampler Module and Probe

By connecting to one of the Atlas Syringe Pump valves, this new module and probe operate in combination to aspirate up to six samples from the reactor at user-defined intervals to allow automated dosing to a reactor from 1 syringe while taking 6 samples using the other syringe or simply taking 12 samples.

The Autosampler Module holds six 2-mL HPLC vials and can be mounted on the provided support rods. The Syringe Pump with six-port selection valve is then able to sequentially aspirate samples from the reactor into the vials using the Autosampler Probe, which is located after the Autosampler Module. The Autosampler Probe consists of six PTFE pipes encased in a chemically resistant PTFE and glass sheath. It can be placed inside a jacketed reactor lid port, and quickly and easily connected to the Autosampler Module.

The Atlas Syringe Pump is a flexible module for volumetric dosing that consists of two syringes with six-port valves and can be configured into either two refilling flows or one continuous flow. Furthermore, a choice of dosing modes allows simple reagent additions or the active control of parameters such as pH and temperature using Atlas sensors. With the ability to be operated in standalone mode, or be controlled via the Atlas base unit or PC software, users are provided with a versatile instrument, which allows automated reagent addition or autosampling with data logging.

More: www.syrris.com

Atlas FT-IR System

With integrated mid-IR capabilities, this fully automated system combines the technology of the Atlas automated reactor with Bruker Optics' Matrix-MF, a process-ready fourier transform infrared (FT-IR) spectrometer for real-time in situ reaction monitoring. Available in a range of vessel sizes, from 50 mL to 5 L, this compact system fits easily into fume cupboards, and is considered ideal for laboratories performing real-time analysis of chemical reactions and processes. This system can be used to examine product yields, impurities, reaction kinetics, end points, and can be easily upgraded to provide further functionality such as reaction calorimetry, pH control, gravimetric or volumetric reagent addition, crystallization control, and more.

More: www.syrris.com

THE AUTOMATION PARTNERSHIP

Coda System

The Coda high-throughput automated nanoliter assay plate production system integrates up to three Labcyte Echo 555 liquid handlers into a compound management workflow to enable fast and efficient production of up to 300 384-well plates in 4.5 h (at 5-nL sample volume). This modular system can be configured to suit any sample management program, and would typically include a conventional liquid handler for dispensing buffer or diluent, a centrifuge for ensuring liquids are at the bottom of the plate, and The Automation Partnership's (TAP) specialist Echo robotic feeding arm. Coda also can have labeling and plate sealing modules integrated, as well as use PlateSafes or plate hotels to ensure full compound tracking and secure plate storage. When coupled with relevant modules of TAP's Concerto Sample Management Software, Coda can generate a comprehensive range of output plate formats.

More: www.automationpartnership.com

CompacT CellBase

This new automated system from TAP is designed for culturing stem cell and other adherent cell lines in a Good Manufacturing Practice environment. Based on TAP's CompacT SelecT cell-culture system, the CompacT CellBase is available with easy to configure cell-processing protocols. This offers cell therapy manufacturers the flexibility to automate cell seeding, expansion, media changing, and cell harvesting in an aseptic environment. An optional module is also available for CompacT CellBase that measures confluence and, at set thresholds, automatically begins cell harvesting, thus maintaining stem cells in an undifferentiated state without any manual intervention.

More: www.automationpartnership.com

THERMO FISHER SCIENTIFIC

Application Note: Nitrogen/Protein Determination in Animal Feed by the Thermo Scientific FLASH 4000 Series

According to Thermo, the precise determination of protein content in finished animal feed, through the determination of nitrogen, is fundamental to achieving high nutritional quality of animal feed. The Dumas Combustion method, approved by the Association of Official Analytical Chemists, monitors nitrogen concentration in animal feed in a much quicker, safer, and more reliable way than the conventional Kjeldahl method. The FLASH 4000 is based on the Dumas combustion method, and provides significant advantages. For example, it does not require sample digestion or toxic chemicals.

The novel analyzer effectively tests for levels of nitrogen in a wide range from low-to-high content without matrix effect and with reduced sample preparation. The analyzer achieves a relative standard deviation of less than 2% according to the official Dumas Combustion method, indicating that fine homogenization is not necessary. In

addition, no memory effect is observed when changing the type of sample, ensuring complete detection of the nitrogen present in the sample. The applicability of the FLASH 4000 extends even further, providing an automated, precise, and reliable method to monitor levels of nitrogen/protein in any type of food and beverage using large sample amounts of more than 2g.

More: www.thermo.com/flash4000

Application Note: Analysis of Pesticides and Flame Retardants in Drinking Water According to US EPA Method 527 by Single Quadrupole GC/MS

A new application note illustrates how the Thermo Scientific DSQ II single quadrupole mass spectrometer provides an effective method for the accelerated analysis of flame retardants and pesticides in drinking water. The note evaluates alternative injection, separation, and detection parameters compared to those cited in EPA Method 527. These alternative parameters are achieved when combining the DSQ II single quadrupole mass spectrometer, the Thermo Scientific FOCUS GC gas chromatograph and AS 3000 II autosampler. In addition, the Thermo Scientific EnviroLab Forms 2.5 data analysis and reporting software is used for workflow optimization and data review and reporting.

According to Thermo, this application is challenging because of the wide mass range of the analysis. However, innovations in electronic carrier gas control and the fast scanning capabilities of the DSQ II result in an average instrument detection limit of 0.034 µg/L comparing favorably to those detailed in the EPA Method 527. In addition, the use of a surge splitless injection with high column flow rate generates peak widths of 3 s, which are effectively and accurately characterized due to the fast scanning speeds of the DSQ II.

More: www.thermo.com/enviro

Application Note: Environmental Series—Trace Contaminant Analysis in Brine Using an iCAP 6000 Series Duo ICP

Detailed information about how the iCAP 6000 Series helps Borregaard quickly and accurately measure the trace element content of NaCl produced on site, ensuring detection limits are within range. Borregaard's core business is based on a biorefinery that manufactures wood-based products. The company also produces caustic soda and hydrochloric acid for internal use and for sale to external customers. The company's old mercury cell electrolysis plant was replaced by a modern, environmentally friendly membrane cell electrolysis plant, with the caustic soda produced being used in Borregaard's own factories, while the chlorine is processed into hydrochloric acid.

According to Thermo, the analysis of demanding environmental matrices, such as strongly concentrated salt solutions, can often pose analytical challenges due to the

high matrix content and low trace elemental contaminant requirements. For Borregaard, one of the critical parameters of the caustic soda and chlorine production processes is the purity of the feed brine, with respect to the concentrations of calcium (Ca) and magnesium (Mg). The sum of these two elements must be less than 20 µg/L in 30% NaCl. Borregaard needed a rugged, reliable ICP that would cope with the online analysis of the NaCl produced on site day in, day out and that would help ensure the purity of the feed brine. The iCAP ensures that the critical elements (Ca and Mg) are well within range for both the in-house and the external brine sample detection limit, which allows for their easy analysis below these required levels.

More: www.thermo.com/icap

Case Study: Implementing a Mission Critical Client/Server Chromatography Data System for Continuous Uptime—Application of Thermo Scientific Atlas CDS and Microsoft Cluster Service

A new case study from Thermo details a project undertaken on behalf of one of the world's largest manufacturers operating in more than 20 countries across North America, South America, Europe, and the Asia-Pacific region. The manufacturer selected Thermo Scientific Atlas Chromatography Data System (CDS) to control and process data from the more than 60 gas and liquid chromatographs in its process control laboratory. With a demanding workflow, where a typical chromatographic analysis is expected to occur within 30 min or less during routine work operations, the continuous availability and operation of instruments and their data processing through a CDS are part of a manufacturing critical operation. Thermo Scientific Atlas CDS is used by the manufacturer to provide distributed instrument access, chromatography data acquisition, and data calculations for management to assess the quality and performance of various manufacturing processes.

As part of a laboratory modernization initiative, the manufacturer looked into further improving its CDS deployment, making it more robust and reliable. Instrument controllers for the Atlas CDS were upgraded to the latest controller variant, the "24/7," which provides automated, real-time instrument control and data acquisition for up to four instruments on a LAN simultaneously. The next step was to design and implement a solution that would automatically perform server failovers without impacting laboratory operations.

The project had two requirements: deliver an automated solution so that manual intervention was not required to switch between the live server and the backup server; and the solution must be transparent to the company's CDS users and have no impact on the operations of the laboratory or on the plant relying on the data.

The project was implemented using Computer Sciences Corporation, a member of the Thermo Scientific Global Partner Alliance. To reduce the incidence of single point of failure for the manufacturer's existing CDS, the solution

involved the implementation of Atlas CDS on Microsoft Cluster Service.

More: <http://marketing.thermoinformatics.com/cds>

Orbitor RS

According to Thermo, its new Orbitor RS is a high-speed microplate mover offering proven, reliable performance with totally flexible plate handling. Extensive vertical reach allows multiple stacked or high-density instruments to be loaded in a small footprint, and a bidirectional telescoping arm provides superior reach, improved user safety, and unlimited base rotations within a 360° workspace. The Orbitor RS was developed using technology from the RapidStak and Dimension4 product lines.

More: www.thermofisher.com

STEM Integrity 10 Reaction Block

According to Thermo, this highly sensitive, 10-channel detection system for determining compound solubility accurately maintains conditions within each individual cell. With 10 independent temperature control zones, ranging from -30 to 150 °C, temperature is maintained by either the block itself or by using a probe within the solution. With a temperature stability of ±0.2 °C and a minimal setpoint overshoot of 0.1 °C, extreme accuracy is guaranteed. Each cell has wide stirring control of 250–1200 rpm and a working volume of between 2 and 25 mL. Controlled via the integrated microprocessor with a user-friendly intuitive touch screen, operation is both safe and easy.

More: www.thermofisher.com

FH100 Variable-Speed Peristaltic Pump

A newly designed, integrated three-roller pump head allows for fast tubing changes, and simple setup and operation. The new pump features digital control with a simple keypad user interface and three-digit LED pump speed display in 1-rpm increments. According to Thermo, the FH100 peristaltic pump system provides a number of important advantages for users, including single-channel variable flow from 0.1 to 3000 mL/min at a variable speed range of 4–400 rpm. The unit's powerful motor provides better than 1% speed control accuracy and repeatability as well as remote control operation for applications including fume hoods and small-scale cell culture, fermentation, and filtration processes. The pump is also reversible, allowing for purging of transfer lines or emptying containers. An integral tachometer corrects for line, load, and heat drift, ensuring high accuracy and repeatability. The pump also has a small footprint (12.5" × 12.5" × 6.5") and stackable feature.

More: www.thermofisher.com/fluidhandling

Next-Generation Temperature Control Products

This new line of refrigerated and heating bath/circulator products from Thermo allows users to match a specific thermostat with a refrigerated or heated bath to meet specific application requirements. Three levels of thermostats are

available to provide varying degrees of features and performance. These new temperature control products are designed to enhance ease of use and reliability, reduce noise levels and save considerable energy—thousands of kilowatt hours—during the life of the system.

More: www.thermo.com/tc

OMNIC Specta Software for Raman Applications

Previously available only on FT-IR instruments, the new OMNIC Specta for Raman technology is designed to achieve productivity and sensitivity improvements in fast-paced environments that need to analyze the molecular composition of raw materials, production processes, and finished goods. Enhanced data presentation features for multicomponent searching transforms OMNIC Specta to an efficient method for one-step identification of complex materials. According to Thermo, the OMNIC Specta is designed to make spectroscopy accessible to a wide, nonspecialist audience.

More: www.thermo.com/specta

Watson LIMS 7.4

Unique to version 7.4 of Watson Laboratory Information Management System (LIMS) is enhanced functionality for incurred sample reanalysis (ISR). Watson LIMS 7.4 allows ISR on an individual sample basis, and eliminates the previously required mandatory repeat runs for bioanalytical samples. Watson's new ISR reporting features provide new comparison methods with built-in calculations and greater ease of use by enabling flexible, preconfigured reporting of ISR results using templates.

Additional new functionality enhancements to Watson 7.4 include performance enhancements in the Design Summary Report that increase reporting speed, enhancements to the Immune Response Module, and the Watson Web Services Library for easier management of the status of samples. Users can choose samples with a Positive Screen or a Positive Titer result for use in subsequent assay tests, and import samples and sample-related information from external applications. Watson LIMS v. 7.4 also includes a built-in data interchange with Thermo's TSQ Series mass spectrometers.

More: www.thermo.com/informatics

SRS Pro Solvent Recycling System

For the re-use of solvent and the ability to reduce mobile phase consumption by up to 90%, this new system redirects untainted mobile phase to the solvent reservoir during isocratic HPLC operation. Powered directly from a USB connection, with easy plug and play operation, this system is considered ideal for any chromatography laboratory looking to conserve solvent use.

Easy-to-use software enables simple configuration of the system parameters and includes online monitoring and audit trail facilities.

More: www.thermo.com/recyclesolvent

Mass Frontier 6.0 Mass Spectrometry Software

According to Thermo, its new Mass Frontier 6.0 software package offers sophisticated features for the management, evaluation, and interpretation of mass spectra. The software is applicable to small-molecule structural elucidation in a wide range of applications, including metabolite identification and impurity analysis in drug discovery and toxicology studies. Providing comprehensive spectral data and fragmentation mechanism knowledge management, this new version of Mass Frontier facilitates structural elucidation by simplifying the interpretation of MSⁿ spectral data.

A unique capability of Mass Frontier 6.0 is its copyrighted Fragmentation Library, which contains fragmentation mechanisms for small molecules that have been collated from all available printed media dedicated to mass spectrometry. Each mechanism, along with the chemical structures, is manually and automatically verified and saved in the library along with complementary information such as the title, authors, and source of the information. The library collection, together with 24 general ionization, fragmentation, and rearrangement rules serves as a knowledge base for the prediction of fragmentation pathways from user-provided structures.

In addition to the literature-based Fragmentation Library, Mass Frontier 6.0 also allows users to create their own library of customized fragmentation mechanisms and can learn these mechanisms and apply them to predict fragments intelligently. The new version also offers SQL client-server capabilities for dynamic library searching and storage. Mass Frontier also provides expert-annotated spectral libraries in both positive and negative ionization modes from common pharmaceutical compounds and human metabolites for an empirical knowledge database applicable to pharmacology and toxicology studies. The software features intelligent knowledge management systems with a flexible database structure allowing heterogeneous data (spectrum, spectral tree, structure, fragmentation mechanism, experimental conditions etc.) to be stored, transferred, and queried in and between libraries. MSⁿ spectral trees acquired from Thermo Scientific ion trap products can be automatically deconvoluted in Mass Frontier, which assists in data comparison. The new Fragment Ion Search (FISh) function provides fast screening for structurally similar compounds through filtering a list of fragments acquired either by theoretical fragment prediction or experimental MSⁿ spectral trees.

The product complements Thermo Scientific MetWorks metabolite identification software for the study of biotransformations and SIEVE differential analysis software for the study of metabolomics. The new version of the software is also fully compatible with high-resolution accurate-mass data from the Thermo Scientific LTQ Orbitrap family of products.

More: www.thermo.com/massfrontier

iSRM and Pinpoint Software

To increase the productivity of quantitative proteomics research, Thermo now offers Intelligent Selected Reaction Monitoring (iSRM), which improves the throughput of SRM assays, and Pinpoint Software for automated method development and quantitative analysis of SRM-based targeted peptide assays.

iSRM is available on all Thermo Scientific TSQ (triple stage quadrupole) instruments to increase the sensitivity and selectivity of targeted quantitation assays for simultaneously verifying and quantifying targeted proteins. iSRM is designed to target as many as 1000 peptides and handle over 10,000 SRM transitions in a single experiment.

Pinpoint, available as a free download, is designed to simplify the transition from early-stage biomarker discovery to large-scale, quantitative verification of putative biomarkers and general quantitative proteomics.

More: www.thermo.com/proteomics and www.thermo.com/pinpoint

Cellomics ToxInsight Solution

According to Thermo, this new combination of imaging hardware and analysis software couples prevalidated panels of toxicity assessment targets to provide a risk assessment tool for in vitro toxicity testing. Harnessing the power of cell imaging to make multiple toxicity assessments on a cell by cell basis, the ToxInsight IVT Platform unites automated instrumentation, software, and reagent cartridges within a simple, intuitive workflow, offering improved sensitivity and specificity compared to traditional methods.

More: www.thermo.com/toxinsight

Sorvall Micro-Ultracentrifuge Models

According to Thermo, two new Sorvall Micro-Ultracentrifuge models deliver improved versatility in rapid, small-volume processing of samples including viruses, cellular organelles, lipoproteins, nucleic acids, and nanoparticles. Both models offer an expanded volume range, accommodating tubes from 0.2 to 30 mL. These systems use a cutting-edge drive system, providing maintenance-free performance and rotor imbalance protection.

The new Sorvall MTX 150 is up to 20% smaller than other benchtop models in its class and offers a centrifugal force in excess of $1,048,000 \times g$. It can achieve a maximum rotational speed of 150,000 rpm in 80 s.

The new Sorvall MX series offers the same versatility as the Sorvall MTX 150 in the most-compact floor model configuration currently on the market. Available in two versions with maximum speeds of 150,000 or 120,000 rpm, its small footprint of 2.3 ft² (0.21 M²), in combination with minimal noise (below 48 dBA) enables convenient in-lab location.

More: www.thermo.com/centrifuge

TTP LABTECH AND INVITROGEN

HTS Platform Solutions for Cytotoxicity

According to TTP LabTech, when deployed with ready-to-use Molecular Probes kits and reagents from Invitrogen, the Acumen [®]X3 fluorescence microplate cytometer offers an ultra high-throughput system for cell-based screening with enhanced multiplexing capability that can maximize data content and the rapid generation of robust data sets. With these robust Molecular Probes high-content screening products, a number of cytotoxic phenomena can be analyzed including cell viability, DNA damage, and cell cycle processes such as mitosis.

More: www.ttplabtech.com

WARWICK ANALYTICAL SERVICE

Service Note: Determination of Trace Metals

A new analytical service note from Warwick describes the accurate and precise determination of trace metals in organic and inorganic materials using inductively coupled plasma–optical emission spectrometry (ICP-OES).

According to Warwick, it is able to resolve the most complex spectra and analyze even the most difficult samples. Routine detection limits are low for most elements (typically <10 ppb) and multielement determinations can be achieved rapidly and precisely. For particularly demanding materials, such as metal oxides, metallic catalysts, polymers, and geochemical materials, that do not dissolve well by traditional means, high-pressure microwave digestion apparatus can be used to effectively and rapidly digest samples ready for ICP-OES analysis. The result is enhanced data reproducibility and improved sensitivity.

More: www.warwickanalytical.co.uk/metals.htm

WESTERMO TELEINDUSTRI

Redfox Ethernet Switches

According to Westermo Teleindustri, its new Redfox range of high-performance industrial Ethernet switches with enhanced routing functionality is designed to build cost effective, secure, and reliable networks that would previously have required several different units. This new off-the-shelf version of Redfox is a DIN rail mountable unit with a heavy-duty aluminum enclosure for maximum strength, heat dissipation, and resilience to extreme levels of electromagnetic interference (300 A/m). Manufactured from industrial grade components and able to operate in temperatures between -40 and $+70$ °C (with no internal fans), Redfox has a mean time between failure of 600,000 h.

As routing becomes an essential function for merging infrastructure and factory automation networks, the Redfox's static routing and firewall functions can provide simple segregation to ensure dataflow is controlled between

networks. Comprehensive VLAN (Virtual LAN) support allows the physical switched network to be subdivided increasing security and network bandwidth and improving manageability. VLANs can also be allocated to particular switch ports and centrally configured.

More: www.westermo.com

WLD-TEC

Autoloop^{PRO}

The Autoloop^{PRO} fully automatic carousel for flame sterilizing inoculation loops has stable housing, removal positions on both sides for right and left handers, and a fully graphic display. It is suitable for up to four inoculation loops. Flaming and cooling time can be adjusted to the second. The carousel rotates and controls flaming automatically, and when flaming is completed, the display shows the remaining cooling time and the removal positions of cool inoculation loops. Plus, an intelligent sensor of the Autoloop^{PRO} monitors safe sterilization.

More: www.wld-tec.com

MORE NEWS

- Accelerated Technology Laboratories** joined the **Microsoft BioIT Alliance**, which brings together pharmaceutical, biotechnology, hardware, and software industries to explore new ways to share complex biomedical data and collaborate among multidisciplinary teams to expedite discovery in the life sciences. The Alliance also allows members to identify new technologies to overcome the challenges faced by life science companies like data integration, collaboration, and knowledge management that cannot be solved by any organization alone.
- AdvanDx** received FDA 510(k) clearance for GBS PNA FISH for detection of *Streptococcus agalactiae*, aka Group B Strep, from turbid Lim Broths inoculated with vaginal and rectal swabs obtained from pregnant women between 35 and 37 weeks gestation. The 90 min molecular diagnostic test enables rapid and highly sensitive detection of Group B Strep from Lim Broths to help detect colonization in pregnant women.
- Amarna Therapeutics** and the **Organization for Applied Scientific Research TNO** entered into a collaboration agreement to further develop Amarna's viral gene delivery platform SVac. Under this agreement, TNO will develop novel methods for the manufacture, formulation, and testing of viral gene delivery systems such as the SVac platform of Amarna.
- BioGenex** and **Abbott** entered into a definitive agreement to extend the technology co-development
- and distribution agreement to market the Xmatrx platform for the automation of Abbott's FISH product line. Under the terms of the agreement, Abbott customers will have the option to run IHC and ISH on the Xmatrx and BioGenex customers to run FISH on their systems.
- Capsugel** announced that its integrated Licaps Drug Delivery System of Licaps capsules and Liquid Encapsulation Microspray Sealing equipment is being successfully used by **GlaxoSmithKline** to produce new capsule lines with a proven secure seal.
- Chip-Man Technologies'** Cell-IQ live cell-imaging and analysis platform is now available in China through the **ChiFi (Shanghai) Biomedical Engineering Company**.
- deCODE genetics'** CLIA-registered DNA isolation and genotyping laboratory, which processes the company's deCODEme personal genome scans and risk assessment diagnostic tests for several common diseases, was accredited by the **American College of Pathologists (CAP)**. The **U.S. Centers for Medicare and Medicaid Services** granted the CAP Laboratory Accreditation Program deeming authority, and its accreditations can also be used to meet many state certification requirements.
- Denator** announced an agreement with **Harvard Catalyst—Laboratory for Innovative Translational Technologies** at the **Harvard Clinical and Translational Science Center** that will give the Harvard research community access to the company's Stabilizor system for stabilizing biological samples. Denator also announced that the **Proteome Research Center** at the **UCD Conway Institute** in Dublin, Ireland, became a reference center for the company's Stabilizor T1 system for stabilizing tissue sample from the moment of sampling. As a reference center, the Proteome Research Center demonstrates the Stabilizor technology to other potential customers and gains early access to new products for stabilization of biological samples. The **Department of Pharmacology** at the **Penn State College of Medicine** also chose to integrate the Stabilizor T1 system into its proteomic workflows.
- Evotec** announced that it will acquire the zebrafish screening operations of **Summit Corporation**, including operations in Abingdon, UK, and Singapore.
- As part of a long-term partnership, **ExcellGene** and **Adolf Kühner** achieved a milestone in the development of a cell-culture technology for scale up and manufacturing from suspension cultured mammalian cells. The two companies successfully grew mammalian cells for the production of recombinant proteins in an orbitally shaken bioreactor, which allowed for efficient mixing of

suspension cultures while oxygenating cells through the headspace. The cylindrical vessel contained a disposable, sterile bag with appropriate connection tubes for seeding, feeding, gas supply, and harvesting of the culture.

- **FEI Company** received the 100th order for its Titan microscope from **Stanford University**, which ordered the Titan 80-300 environmental transmission electron microscope for a new facility associated with its Nanocharacterization Laboratory.
- **Fluidigm** and **BIOKÉ**, a licensed distributor for the company, announced that **Enza Zaden** chose the **Fluidigm BioMark System for Genetic Engineering and the 96.96 Dynamic Array** to help ensure the quality of its seed supply.
- **Fluidigm Europe** announced that the **University of Cambridge's Cancer Research UK Center for Genetic Epidemiology**, based at **Strangeways Research Laboratory**, purchased the company's **EPI System** for high-throughput SNP genotyping to identify and verify genetic variants that can underlie susceptibility to various cancers.
- **G.E. Healthcare** entered into a strategic alliance agreement with **Fujifilm**. Under the alliance, Fujifilm will develop, manufacture, and supply advanced biomolecular imaging systems to G.E. Healthcare, and the products will be sold worldwide under the G.E. brand.
G.E. Healthcare announced that Dr. Magnus Malmqvist, Inger Rönnerberg, and Robert Karlsson were selected to receive the SBS PolyPops Award in recognition of the development of surface plasmon resonance for high-throughput protein interaction analysis at **Biacore**, Sweden (now part of G.E. Healthcare).
- **Human Genome Sciences (HGS)** and **Novozymes Biopharma** amended an existing license agreement to allow both companies to expand application of their proprietary albumin fusion technology. Under the amended agreement, HGS and Novozymes each has the opportunity to exclusively license and/or sublicense a number of albumin fusion proteins in exchange for royalties and other consideration. No existing HGS or Novozymes products or product rights, including rights licensed to other companies, are affected by these amendments.
- **IDBS** announced that **CSIRO Molecular and Health Technology** increased its use of IDBS' E-WorkBook for chemistry (ChemBook) in support of its polymer research. CSIRO uses ChemBook to manage the diverse and complex data produced in the generation, characterization, and IP security of these molecules.
- **Mettler Toledo Garvens** was awarded the 2009 European FoodTec silver medal for the XS3 AdvanCheK X-ray CombiWeigher for an exemplary and innovative project within the European food industry and its suppliers.
- **Micronic Europe** announced that **Specs** deployed the Tracker TRxD Single Tube Scanner in its laboratories to improve handling and processing of chemical compounds.
- **Molecular Sensing (MSI)** entered into a Life Science Early Access Program research agreement with **VIB Research Institute** to use MSI's proprietary back-scattering interferometry technology to study ligand binding to the membrane-bound γ -secretase complex, an alternative drug target in Alzheimer's disease. The aim of the project is the characterization of the substrate recognition mechanism of the γ -secretase complex and to screen for potential drug compounds that inhibit amyloid build-up.
- **Navitar** announced the sale of **Navitar Coating Labs** to its president, Dan Coursen, who had been with the company for over 35 years. The company name was changed to **Coursen Coating Labs**. Navitar decided to sell the coatings division after it acquired **Special Optics**.
- **Novation Pharmaceuticals** and **Cancer Therapeutics** announced a joint collaboration to identify potent small-molecule compounds for two oncology targets, c-myc and hSSB1. The collaboration involves the use of Novation's Quest drug discovery platform technology alongside CTX's small-molecule compound library and high-throughput screening capabilities. The results of the collaboration will be a series of potent and selective small-molecule compounds with excellent potential for development into novel cancer drugs from both targets. Novation will have ownership of compounds that are active against c-myc, and CTX will have ownership of compounds that are active against hSSB1.
- **Novozymes Biopharma** announced the construction of a new current Good Manufacturing Practice facility at the company's existing site in Tianjin, China that will enable its novel form of Bacillus-based Hyaluronic Acid, HyaCare, to be used within the biomedical and pharmaceutical industries.
Novozymes Biopharma also announced that its Recombumin and albucult products are the first to comply with the new excipient monograph standard for

recombinant human albumin, published in the [United States Pharmacopoeia](#)—National Formulary.

- [Oxford Gene Technology](#) completed processing more than 20,000 samples generated by the [Wellcome Trust Case Control Consortium](#). The project analyzed DNA samples from patients to identify genetic variants that play a role in various human diseases.
- [PerkinElmer](#) entered into a resale arrangement with [LEAP Technologies](#) under which LEAP Technologies will be able to incorporate PerkinElmer's ultra high-performance liquid chromatography (UHPLC) and high-performance liquid chromatography (HPLC) technology into front-end automation systems for mass spectrometry within the United States and Canada. The combined offering is intended to enable LEAP's biotechnology and pharmaceutical customers to derive additional insight into the data of their most demanding applications. The arrangement includes PerkinElmer's Flexarand 200 Series UHPLC and HPLC; Chromera and TotalChrom Chromatography Data Systems software packages; and associated consumables and spare parts, as well as LEAP's CTC LC-1, HTC, and HTS robotic sample handlers. In addition, as a result of this arrangement, PerkinElmer will provide advanced automation solutions from LEAP Technologies into markets beyond its traditional customer base, including environmental, food safety, and forensics.

PerkinElmer also announced a co-marketing agreement with Rigaku Americas that allows both companies to share information and provide customers with a single point of contact for PerkinElmer's atomic spectroscopy solutions, including atomic absorption spectrometers, inductively coupled plasma—optical emission spectrometers, and inductively coupled plasma—mass spectrometers, as well as Rigaku Americas' bench-top suite of X-ray fluorescence instruments.

PerkinElmer announced that its board of directors appointed the company's president and chief executive officer, Robert F. Friel, to the additional role of chairman of the board of directors. Friel succeeds Gregory L. Summe, chairman since 1999, who did not stand for reelection.

- [Richter-Helm BioLogics](#) reported a technological breakthrough in the field of purification of antibody fragments from an *E. coli* expression system. Richter-Helm BioLogics finalized the downstream process for Phase III clinical trial material using second Generation Expanded Bed Adsorption (EBA) technology developed by the Danish biotech company [Upfront Chromatography](#). After conducted a series of tests, Richter-Helm discovered significant advantages of

second Generation EBA over the latest, alternative chromatographic methods. A 60% increase in yield was observed using direct capture. The simplified process was less likely to cause processing problems. The processing time to take product from homogenate to clarified, partially purified material was reduced to one working day, decreasing the possibility of product degradation. The volume of buffers required to perform clarification and capture was reduced significantly, effecting cost of manufacture. According to Richter-Helm, Upfront's innovation was in the usage of higher density adsorbents and the proprietary design of an operational system that provided increased flow rates and was free from clogging and channel formation.

- [Thermo Fisher Scientific](#) announced that [Borregaard](#) chose the iCAP 6000 Series Duo ICP emission spectrometer for the detection of trace contaminants in brine—aqueous sodium chloride. [Cancer Research Technology](#) (CRT) purchased 2000 Maybridge Fragments from Thermo Fisher Scientific as the foundation of its new fragment screening library. Wholly owned by [Cancer Research UK](#), the collection will be used in CRT's discovery laboratories for fragment-based screening.

[Japan's National Police Agency](#) (NPA) purchased 51 Thermo Scientific LXQ linear ion trap mass spectrometers and 27 Thermo Scientific Nicolet 6700 FT-IR spectrometers with Continuum microscopes. The NPA will use the LXQ LC/MS/MS system for toxicology screening in each of its 47 prefecture offices and will use the Nicolet 6700 FT-IR system for forensics in nearly half of those offices.

Thermo Fisher Scientific announced a collaboration between [its Biomarker Research Initiatives in Mass Spectrometry Center](#) and [NextGen Sciences](#) to apply new technologies to NextGen Sciences' biomarkerexpress platform, a suite of biomarker services for developing, validating, and applying targeted SRM assays for peptides and proteins in biofluids and tissues.

- [The Automation Partnership](#) is collaborating with the [Technology Strategy Board-funded Rapid Automated Fabrication of Tissues \(RAFT\) Project](#) to develop and commercialize novel technology for rapid production of 3D tissues. The 3-year RAFT Project initially aims to manufacture 3D human corneal tissue using corneal limbal stem cells to determine if this is a viable method of producing a range of different tissue types. Scientists on the RAFT Project at [University College London](#) will work on demonstrating preclinical proof of concept of the efficacy of these tissues for corneal regeneration.
- The [U.S. Army](#) purchased four PCS Pipette Calibration Systems from [Artel](#) for use in Iraqi IP Criminal Evidence

Laboratories in Baghdad, Basrah, and Erbil for routine pipette calibration. The Iraqi laboratories are full-service forensic analysis facilities that examine evidence for the country's criminal justice system.

CALL FOR PAPERS

LabAutomation2010

Poster abstract submissions are still being accepted for LabAutomation2010. For publication in the final conference program book, submissions must be received before **November 2, 2009**. Submissions will be accepted through **January 22, 2010**, but if accepted, will not be printed in the final program. For more information, visit www.labautomation.org/LA10, e-mail info@labautomation.org, or call 888.733.1252 or +1.630.208.6830.

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