

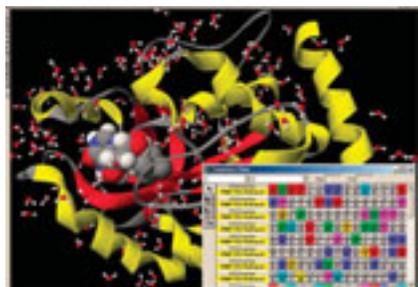


**Fractionation system.** The ProteomeLab PF 2D is an automated, 2-D system for high-resolution analysis of complex protein mixtures. It resolves proteins present in cell lysates, addressing challenges in proteomics research, such as detection of low-abundance proteins; run-to-run reproducibility; quantitation; and detection of membrane or hydrophobic proteins, basic proteins, and very low and very high molecular weight proteins. The ProteomeLab PF 2D requires less time and manpower than traditional, labor-intensive techniques.

**Beckman Coulter** [www.beckmancoulter.com](http://www.beckmancoulter.com)

**Workstation.** The MICROLAB STAR provides automation for post-PCR cleanup. The workstation includes an eight-channel automated vacuum system and an internal gripper. It completes 96 samples in 60 min and automates up to two plates without user intervention. Multiple applications can be automated on the system, including plasmid DNA purification, PCR setup, normalization, or restriction analysis.

**Hamilton** [www.hamiltoncompany.com](http://www.hamiltoncompany.com)



**Visualization software.** BioCACHe 6.0 for Windows provides tools for identifying active sites, including sequence alignment and matching of conserved residues on

homologous 3-D protein structures, accessible surfaces, and crevice maps. Designed for the experimental chemist, the software allows the cleanup of imported PDB files, conformation searching, protein analysis, sequence alignment, homology modeling, and docking ligands into proteins.

**Cache** [www.cachesoftware.com](http://www.cachesoftware.com)

**Mouse bioarray.** The CodeLink UniSet is used for studying gene expression levels and identifying novel drug targets. It contains DNA probes spotted onto a specially prepared glass slide, with each probe representing one of about 10,000 mouse genes. The special coating applied to CodeLink slides creates a 3-D surface that enhances the binding of the DNA probes and improves the sensitivity and data quality of microarray experiments.

**Amersham Biosciences** [www.amershambiosciences.com](http://www.amershambiosciences.com)



**Microarray system.** The MGX 4D is a fully integrated and complete system for an extensive variety of research applications. It is designed to make microarray technology available to any biological laboratory. The MGX 4D is a sensitive, easy-to-use platform that employs chemiluminescence as its detection method.

**MetriGenix** [www.metrigenix.com](http://www.metrigenix.com)

**DNA synthesizer.** The ABI 3900 is a versatile, high-throughput platform that synthesizes DNA oligonucleotides with fast cycle times and low reagent consumption. The system synthesizes primers of various lengths and includes optimized cycles for producing dye-labeled primers

and probes. It has the flexibility to synthesize sequences with lengths greater than 50-mer at scales of 40 nmol, 0.2  $\mu$ mol, and 1  $\mu$ mol and can synthesize all three scales in one run.

**Applied Biosystems** [www.appliedbiosystems.com](http://www.appliedbiosystems.com)



**Plate storage.** The PlateStore mobile microplate storage module is compact and scalable for the storage and automation of compound libraries. It houses and delivers up to 1008 microplates to multiple assay locations—riding on a cushion of air. The modular design provides the scalability to meet any compound storage need, from small sublibraries in secondary screening labs to master archive compound libraries.

**TekCel** [www.tekcel.com](http://www.tekcel.com)

**Fluorogenic primers.** LUX (Light Upon eXtension) primers provide a sensitive and specific detection method for real-time PCR/RT-PCR. Each primer set includes a single-labeled fluorogenic primer and a corresponding unlabeled primer, designed according to the specific sequence of the target gene. This platform allows the user to detect 100 or fewer copies of target genes with a dynamic range of seven orders, perform melting curve analysis to distinguish genuine amplicons from primer-dimer artifacts, use different fluorescent labels for easy multiplexing, and perform quantitation on multiple real-time instrument platforms.

**Invitrogen** [www.invitrogen.com](http://www.invitrogen.com)

**Assay plates.** BioCoat Glutathione and Ni-Chelate assay plates are packaged, ready-

to-use, and precoated with high-quality, covalently coupled glutathione or nickel chelate. All lots are room-temperature stable and screened for a high signal-to-noise ratio and low background to meet the growing demand for high throughput. With these plates, users isolate GST- or His-tagged proteins.

**BD Biosciences**

[www.bd.com](http://www.bd.com)



**Spray dryer.** The Büchi spray dryer B-191 produces dry, uniform powders from 50 to 100 mL of solution in 10 min. The microprocessor-controlled heating system ensures that the desired inlet remains constant even when the drying air flow rate changes. Applications include spray drying, micronization, microencapsulation, and recovery of synthetic and extracted products.

**Brinkmann**

[www.brinkmann.com](http://www.brinkmann.com)

**Column segments.** Radial-Paks have an internal diameter of 5 or 8 mm and are 100 mm long. They can be used for analytical and semipreparative chromatography. The PrepLC column segments have larger internal diameters of 25 and 40 mm (100-mm length) for preparative-scale work. Both types have a wide range of high-resolution stationary phases capable of solving the most difficult separation problems.

**Waters**

[www.waters.com](http://www.waters.com)

**MS detector.** The MSQ is a small, sensitive, single-quadrupole MS detector for both LC and IC, especially separations including salts, ion-pairing agents, and dirty matrices. It incorporates a self-cleaning triple orthogonal atmospheric pressure ionization source for sensitivity and noise reduction. The detector is robust and productive, allowing routine operation over extended periods, even in unattended

mode. The complete system requires little setup or tuning to achieve optimum sensitivity. It has built-in calibration and infusion and is only 12 in. wide, and its integrated design has led to an approximately twofold decrease in footprint area and system volume.

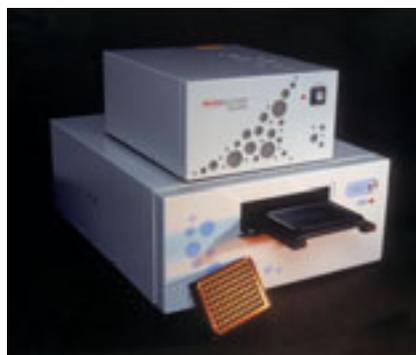
**Dionex**

[www.dionex.com](http://www.dionex.com)

**Data management software.** Security Pack requires the ChemStore add-on module and is available for single PC configurations as well as distributed multitechnique configurations in a client-server network. It offers protection of data acquisition, analysis, and review by means of a mandatory login comprising user identification and password; secure storage of all versions of results with unbreakable links between raw and metadata, ensuring data integrity and traceability; documentation of all activities in logbooks and audit trails for data traceability; and electronic sign-off of each result version according to the guidelines of 21 CFR Part 11.

**Agilent**

[www.agilent.com](http://www.agilent.com)



**Plate reader.** The DynaPro Plate Reader assists in high-throughput biomolecule characterization. This light-scattering instrument allows the performance of hundreds of light-scattering analyses per day. It is nonperturbing and can be used with either 96- or 384-well plate formats.

**Protein Solutions**

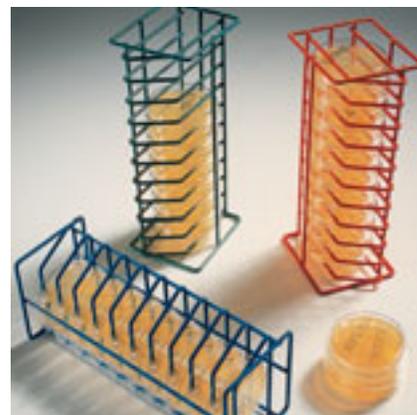
[www.protein-solutions.com](http://www.protein-solutions.com)

**Tubes and reagent.** These products stabilize gene expression profiles in animal tissues. The stabilization reagent quickly permeates tissues, stabilizing and protecting the RNA expression pattern. Immediate protection with RNA<sub>later</sub> technology ensures that downstream analyses truly reflect the expression profile of the intact

tissues. Samples can be archived without risk of RNA degradation, even after multiple freeze-thaw cycles.

**Qiagen**

<http://qiagen.com>



**Plate racks.** Rodac racks are designed to meet customer specifications and are engineered to hold plates tightly in place for convenient carrying in the laboratory and clean room. The racks are made of welded steel rods and are epoxy-coated. They can be vapor hydrogen peroxide-disinfected for isolators and can be steam-autoclaved at 121 °C. They come in blue, orange, and green to differentiate samples.

**BD Diagnostic Systems**

[www.bd.com](http://www.bd.com)

**Elution pump.** The SF3 supercritical fluid chromatography system is a pumping solution for viscous fluids. It is an economical elution pump for gradient systems. The dispense mode is for repetitive sample injection and is controlled by a 305 Pump or Gilson HPLC System Controller Software. Flow rates range from 0.010 to 200 mL/min.

**Gilson**

[www.gilson.com](http://www.gilson.com)

**Message maker kits.** AmpliCap T7, T3, and SP6 are high-yield message maker kits specially formulated to use high concentrations of NTPs that are inhibitory to other kits and “homemade” in vitro transcription systems. They produce the highest yield of RNA having a m<sup>7</sup>G[5']ppp[5']G methylated cap analog on the 5'-end. Capping efficiencies approach 80% for all three kits.

**Epicentre**

[www.epicentre.com](http://www.epicentre.com)

**Platform.** The IQ Kinase assay platform provides high-throughput analysis of protein kinases. They are homogeneous and

universal, so no antibody is required, and they can be used with any plate fluorometer. The IQ can be performed in 96-, 384-, or 1536-well formats, and specific IQ assay kits and reagents packs are available.

Pierce [www.piercenet.com](http://www.piercenet.com)



**Capsule.** The Minimate Tangential Flow Filtration Capsule is a disposable filtration device for research and entry-level production of new drugs. The filtration capsule enables rapid prototyping to accelerate and simplify scale-up for many bioprocessing applications. It is designed for single use, eliminating the need for cleaning and cleaning validation. The capsule's design retrofits to existing devices and prevents flexing when subjected to intense pressure drops. With a range of 10 mL to 2 L, it can be used in all areas of bioprocessing, including biotechnology, molecular biology, protein chemistry, biochemistry, microbiology, and immunology.

Pall Corporation [www.pall.com](http://www.pall.com)



**Workstations.** The 4000 MPH series of instruments and the Microlab Star can perform sample normalization with Vector control software. Vector software accepts data from various plate reader manufacturers, calculates volumes, and creates appropriate pipetting sequences during run time. One

method can be used for repeated normalization procedures with variable sample numbers, final volumes, and concentrations without reprogramming.

Hamilton [www.hamiltoncompany.com](http://www.hamiltoncompany.com)

**Pipet tips.** BioRobotix are liquid-sensing 96-well tips for use in workstations with a Span-8 pod. They are available in sterile, nonsterile, and filtered versions and are quality-control-tested on the actual workstation for which they were created. The 15 quality-control tests include parameters such as total indicator runoff and percentage coefficient of variance.

Molecular Bioproducts [www.mbpinc.com](http://www.mbpinc.com)



**Syringe filter.** The Millex 33-mm syringe filter with Durapore PVDF Membrane is used for the sterile filtration of antibiotics, media preservatives, and protein-containing solutions. It offers nearly 20% more surface area than traditional 25-mm syringe filters, increasing flow rate and throughput and accelerating filtration. The filter has a maximum housing pressure of 150 psig (10 bar) and is available in 50 and 250 packs with pore sizes of 0.1, 0.22, and 0.45  $\mu\text{m}$ .

Millipore [www.millipore.com](http://www.millipore.com)

**Software.** BioPick is an automated solution for laboratories needing to build or manage bacterial libraries. It allows users to select subcloning, dual inoculation, or phage picking. The software allows users to set several critical parameters, such as dwell time and inoculation depth, and can operate unattended with complete plate-filling and lid-handling on board. It can pick from high-density source plates using a vision system that discriminates between blue/white, red/white, and clear plaques.

Apogent Discoveries [www.apogentdiscoveries.com](http://www.apogentdiscoveries.com)



**Cell viability analyzer.** The Vi-CELL automates the widely accepted trypan blue tissue culture protocol. Compared with manual techniques, the number of cells that the analyzer counts is significantly greater, and results are obtained in minutes.

Beckman Coulter [www.beckmancoulter.com](http://www.beckmancoulter.com)

**Enzymes.** Three protein kinases added to this panel include a receptor tyrosine kinase, FGFR4, and two soluble tyrosine kinases, c-KIT and Yes. These active and pure kinases are available in microgram or milligram quantities.

PanVera LLC [www.panvera.com](http://www.panvera.com)



**pH Meter.** This instrument has a large LCD display and step-by-step procedure icons. The measuring ranges are  $-0.00$  to  $14.0$  pH,  $-2000$  to  $2000$  mV, and  $-170.0$  to  $199.90$   $^{\circ}\text{C}$ . Temperature, drift, and direction are visible during measurement, and up to nine pairs of pH or mV-temperature valves can be stored on demand, at selected time intervals, or when the reading is stable.

Brinkmann [www.brinkmann.com](http://www.brinkmann.com)

**Informatics tools.** The KnowItAll ADME/Tox Edition is an integrated system for ADME/Tox evaluation developed as the result of a collaboration between Bio-Rad, ComGenex, and CompuDrug International. The system reduces the time spent in drug discovery and development and helps drug developers avoid unnecessary R&D costs by enabling them to predict, evaluate, and eliminate unsuitable drug candidates early in the drug discovery process, before they are even synthesized. Tools include applications to identify compounds with potentially poor absorption profiles, predict a compound's metabolic fate, and assess its potential toxicity.

**Bio-Rad**

[www.bio-rad.com](http://www.bio-rad.com)



**Cartridges.** These units replace flash columns in purification systems with luer lock end fittings without additional hardware or changing method protocols. They are compatible with Analogix and ISCO Rediseq flash purification systems and are available in five bed masses: 4, 12, 40, 120, and 330 g. The RS series allow purifications from 3 mg to 15 g, and custom, normal, and reverse-phase sorbent packing is available. The cartridges are disposable and prepacked with flash silica for normal phase separations and purification.

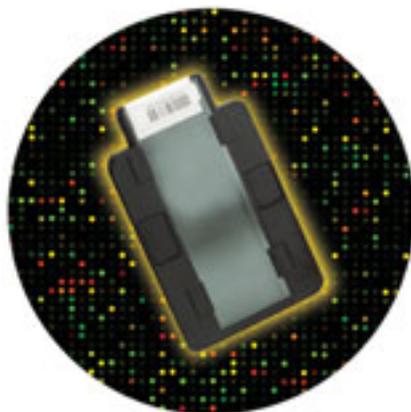
**Analogix**

[www.ana-logix.com](http://www.ana-logix.com)

**Software.** The ProteinLynx Global SERVER 2.0 suite is available on the IBM eServer pSeries 630. It is equipped with IBM POWER4 microprocessors, a server-on-a-chip that contains two 1-GHz processors, and self-healing technologies to guard against, and recover from, system failure. The software is designed to run Linux and AIX operating systems, and it increases the range of manageable and scalable platforms.

**Waters**

[www.waters.com](http://www.waters.com)



**Microarray kit.** These 60-mer catalog oligo kits can be used by researchers in disease and drug discovery because they show improvements in sensitivity over the 25-mer probe length format. Based on  $1 \times 3$  in. glass slide formats, the kits are easily integrated into established microarray laboratories. They show high sensitivity and can detect one transcript per cell, per million cells. Kits also provide high reproducibility, quality data, access to sequence information, comprehensive content, and customization.

**Agilent Technologies**

[www.agilent.com](http://www.agilent.com)

**Cloning kits.** CopyControl PCR incorporates CopyControl cloning technology, which enables users to grow PCR clones at single copy to ensure insert stability and cloning of encoded expressed toxic proteins; and then, whenever users desire, they can induce the clones to make up to 200 copies per cell for high yields of DNA for all applications. PCR and cDNAs up to 15 kb are efficiently cloned.

**Epicentre**

[www.epicentre.com](http://www.epicentre.com)

**Rehydration solution.** DeStreak prevents horizontal streaking in the first dimension of 2-D gel electrophoresis. By minimizing streaking, it improves the clarity and reproducibility of 2-D gel electrophoresis. The same mechanism by which DeStreak eliminates streaking in the pH region 7–9 also prevents the nonspecific oxidation of proteins that would otherwise generate extra protein spots and irreproducible 2-D patterns. It also minimizes gel distortion caused by streaking in any run length or pH range and is effective when used with high sample loads.

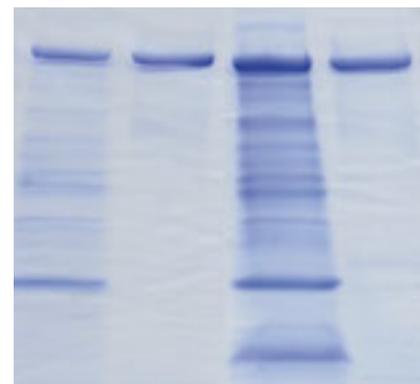
**Amersham Biosciences**

[www.amershambiosciences.com](http://www.amershambiosciences.com)

**Analyzer.** The Mercur provides an automated atomic fluorescence spectrometer based on the cold-vapor technique for mercury analysis, from the sub-parts-per-trillion to the mid-parts-per-billion level on a single system. The fully integrated computer with a high-performance touch screen ensures maximum operating comfort. As a stand-alone system, it has extensive features without the need for an additional computer. Features include low detection limits, a wide dynamic range of up to six decades, a maximum degree of automation and high sample throughput, a continuous flow mode with and without autosampler, and integration of an intelligent dilution routine with AS 52s autosampler.

**Analytik Jena AG**

[www.analytik-jena.de](http://www.analytik-jena.de)



**Buffer.** Talon xTractor is for immobilized metal affinity chromatography. The buffer gently disrupts bacterial cells for protein purification, and it is optimized for extraction of polyhistidine-tagged proteins, so it is compatible with all BD Talon resin applications. The xTractor method does not denature or shear the proteins, improving the odds of preserving valuable biological activity.

**BD Biosciences**

[www.bdbiosciences.com](http://www.bdbiosciences.com)

**Reaction station.** The Carousel 6 allows chemists to increase the productivity of their chemistry for larger-scale synthesis, including process development and the synthesis of intermediates and building blocks. This synthesizer combines the technology of the 12-place Carousel with familiar 250-mL flasks and formats. It provides six heated and stirred positions on a standard hot-plate stirrer and boils water in under 25 min.

**Genevac**

[www.genevac.com](http://www.genevac.com)



**Safety cabinet.** The SterilchemGARD III Advance is an ergonomically enhanced biological safety unit designed for class II, Type B2 installations where total exhaust is required. The cabinet avoids air recirculation and generates 100% exhaust to protect personnel from particulates, gases, and vapors. It is useful in toxicology, microbiology, and pharmacology applications in which clean air is essential and small amounts of gases, vapors, or chemical effluents are generated. The cabinet is available in 4- and 6-ft models.

**Baker Company** [www.bakerco.com](http://www.bakerco.com)



**Cabinets.** The class II Heraeus HERASafe KS safety cabinets provide product and personnel protection through their ergonomic design. They feature a slanted front window, rear cabinet wall, digital eye-level display, and remote control. The information displayed includes downflow rate, total operating hours, time of day, and optional UV-C irradiators' operating time. The display also has a stopwatch function. The work aperture has a height of 10 in.

**Kendro** [www.kendro.com](http://www.kendro.com)

**Genotyping.** This product allows researchers to conduct ultrahigh-through-

put genotyping using the 3730xl and 3730 DNA analyzers. It can help production-scale laboratories analyze more than 1 million genotypes per instrument per day. The system uses multiplexing to rapidly identify large numbers of target genetic sequences in a single biological sample.

**Applied Biosystems** [www.appliedbiosystems.com](http://www.appliedbiosystems.com)



**Scanner.** The GeneChip Scanner 3000 is a microarray scanner about the size of a personal computer. It gives researchers peak scanning performance for applications that include RNA expression and DNA analysis. Data from the scanner are compatible with data from previous experiments using GeneChip arrays, as well as with other Affymetrix instruments and software.

**Affymetrix** [www.affymetrix.com](http://www.affymetrix.com)

**Platform.** The IQ Kinase assay platform provides high-throughput analysis of protein kinases. They are homogeneous and universal, so no antibody is required. The IQ can be performed in 96-, 384-, or 1536-well formats.

**Pierce** [www.piercenet.com](http://www.piercenet.com)

**Assay and plates.** The MultiScreen PAMPA (parallel artificial membrane permeability assay) and permeability filter plates are for 96-well predictive, non-cell-based assays. The plates support artificial membrane strategies for passive transport assays and act as predictive models for oral absorption. Predictive outcomes such as these are an effective and reliable way to increase screening throughput and eliminate the costly testing of unsuitable transcellular compounds before Caco-2 tests.

High-throughput MultiScreen plates increase library screening over IAM columns. The plates are automation-compatible.

**Millipore** [www.millipore.com](http://www.millipore.com)

**Catalog.** This directory contains a wide range of products for liquid handling, including more than 800 different glass and plastic sample vials, from 0.1 to 500 mL in volume, with selected caps and seals to meet modern requirements. The catalog also lists automatic synthesizers for peptide, organic, and catalytic synthesis. For tissue culture work, roller apparatus, culture flasks, and a variety of homogenizers are supplied, as well as special consumables such as media bottles, tubes, and sample vials.

**Zinsser Analytic** [www.zinsser-analytic.com](http://www.zinsser-analytic.com)



**Camera.** The integrated systems available include the three-chip cameras—the SyncroCOOL 435 and JVC KY-F75. In addition, single-chip cameras, such as the JVC KY-1030, Nikon DXM1200, and Sony DFW-X700 and SX900 models, are fully integrated. They also have high-speed refresh rates.

**Syncroscopy** [www.syncroscopy.com](http://www.syncroscopy.com)

**Hybridization station.** This fully automated microarray processing system enables automated hybridization of microarrays on slides. It is compact and provides a solution for medium- to high-throughput hybridization. Through its modular design, it is possible to combine 1 master system with 3 extension units (12 additional slides per unit) to process up to 48 slides using up to 4 different protocols in parallel. Incubations may be performed in the range 4–85 °C.

**Tecan** [www.tecan.com](http://www.tecan.com)

**Hybridizer.** This slide processor fully automates the hybridization step of microarray applications. The flexible, modular system minimizes manual handling, simplifying microarray experiments and improving the reliability and reproducibility of results. It automates slide pretreatment, nonstatic hybridization, stringency washes, and slide drying. The system includes 1–5 modules, each containing 6 hybridization chambers, and offers users the flexibility of processing 1–30 slides at a time.

**Amersham Biosciences** [www.amershambiosciences.com](http://www.amershambiosciences.com)

**Incubators.** These instruments are robot-accessible and provide high-speed access for the incubation of assays in an environment. The incubators come in three sizes, and each is equipped to handle 96-, 384-, 1536-, and deep-well plate formats. The units can be configured with both CO<sub>2</sub> and humidity controls using an infrared-based sensor technology. Other options include high-speed access, refrigeration, lid han-

dling, and landscape and portrait plate presentation.

**Zymark** [www.zymark.com](http://www.zymark.com)

**Workstation.** This workstation has automated reaction-handling capability and a 24-sample deck with interchangeable racks for unlimited capacity, along with parallel throughput with sequential reaction control. Its dimensions are 14.5 × 27 in., and it fits into standard hoods.

**CEM** [www.cem.com](http://www.cem.com)

**Microplate reader.** For 6- to 384-well plate formats, this detector is ideal for many life science applications in the 340–750-nm wavelength range, including colorimetric reporter assays, ELISAs, and protein quantification assays. The instrument offers single and dual wavelength; kinetic, linear-scan, and area-scan measurement modes; as well as multiple data ports for device connection. It also features shaking and temperature control. The software is easy to program and pro-

vides extensive kinetic data reduction as well as quantitative and qualitative analysis.

**Beckman Coulter** [www.beckmancoulter.com](http://www.beckmancoulter.com)



**DNA gel extraction.** This kit recovers fully functional DNA from agarose gel slices in a single 10-min spin. DNA fragments that are 100–10,000 bp in size are efficiently recovered. The purified DNA is ready for sequencing, cloning, or labeling with no additional purification. The kit is available as a 50-pack containing 50 Montage DNA Gel Extraction units, centrifugal devices, and a 500-mL bottle of 50 × modified TAE buffer for gel casting and running.

**Millipore** [www.millipore.com](http://www.millipore.com)

**Website/literature.** This website and the 12-page booklet display more than 100 sterile, leak-proof, biologically tested packaging products, including PETG/PET media bottles, B3 media bags, HDPE narrow-mouth bottles, PETG serum vials, Biotainer bottles and carboys, and Micro Packaging Vials.

**Nalgene** [www.nalgene-packaging.com](http://www.nalgene-packaging.com)

**Benchtop synthesizer.** The 2050 is a compact unit that enables process chemists to perform quick, exploratory, parallel reaction experiments at different temperatures. The 2050 offers independent temperature control over five reaction vessels, the option of using fewer than all of the vessels, and a cold reflux head to recycle volatile reagents back to the reaction mixture. It also provides independent high-temperature reaction cutoffs for each vessel and a sealed reaction environment for inert-gas experiments, prevention of external condensation, and safety.

**Argonaut Technologies** [www.argotech.com](http://www.argotech.com)

► For more information, go to [www.adinfonow.org](http://www.adinfonow.org).