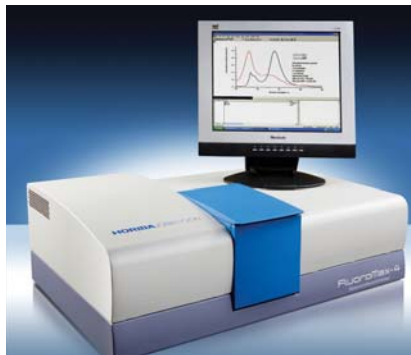


Product Resources



Spectrofluorometer

HORIBA Jobin Yvon's FluoroMax-4 benchtop spectrofluorometer reportedly features a sensitivity of at least 400,000 cps for the water-Raman peak at 397 nm and a signal-to-noise ratio of 3000:1 minimum. According to the company, the spectrofluorometer uses an ozone-free xenon arc lamp for broadband coverage from the UV to near-IR. Optional accessories include automatic polarizers, a stopped-flow device for kinetics, a microwell-plate reader, and an autotitrator. **HORIBA Jobin Yvon**, Edison, NJ; www.jobinyvon.com

Circle 100



RF coils for ICP

Glass Expansion has recently added RF coils for Agilent, JY, and the Thermo iCAP 6000 spectrometers to its product line. These augment the company's existing line of coils, which includes products for older Thermo ICP systems as well as PerkinElmer and Varian models. According to the company, regular replacement of corroded coils increases energy transfer efficiency and reduces the load on the RF generator. **Glass Expansion, Inc.**, Pocasset, MA; www.geicp.com

Circle 103



ATR accessory

PIKE Technologies' grazing angle option for its VeeMAX II ATR accessory is designed to aid in the analysis of monomolecular layers on silicon to obtain FT-IR spectra. The accessory reportedly provides high throughput to cut down on sampling time and facilitate detection of the monomolecular layers of silicon without utilizing a liquid nitrogen-cooled detector. Crystal options for the accessory include ZnSe, ZnS, and Si. **PIKE Technologies**, Madison, WI; www.piketech.com

Circle 101



High-pressure nebulizers

Meinhard's model TR-50-C high-pressure nebulizers are designed to yield smaller droplet sizes, better signal-to-noise ratio, and improved limits of detection for ICP and ICP-MS. The nebulizers are available with natural aspiration rates of 0.5, 1, 2, and 3 mL/min and are also manufactured in quartz for ICP-MS users who want to minimize boron background. **Meinhard Glass Products**, Golden, CO; www.meinhard.com

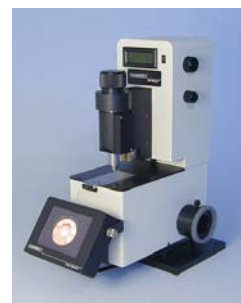
Circle 104



Electron multiplying CCD detector

The Newton electron multiplying CCD detector from Andor Technology is designed to provide fast detection and readout with single photon sensitivity. According to the company, the product features a 3.0-MHz readout in both electron multiplication mode and conventional amplifier modes. The product is designed for full integration with Andor's Shamrock spectrographs, or for use with third-party spectrographs. **Andor Technology**, South Windsor, CT; www.andor.com

Circle 102



ATR system

Harrick's Video Meridian micro-diamond ATR system is designed for use with all FTIR spectrometers to analyze a wide range of samples with little or no preparation. The product comes with a built-in camera, a pressure applicator with digital readout, and a Perma-Purge feature that enables rapid sample and crystal exchange without interrupting a system purge. Users can view samples in real-time on the data station's terminal or on the optional LCD display with 44X magnification. **Harrick Scientific Products**, Pleasantville, NY; www.harricksci.com

Circle 105



Portable analyzer

The NITON XLt 797X portable analyzer from Thermo Electron is designed to rapidly screen metals, polymers, and components for RoHS, ELV, and WEEE compliance screening. The device's small sample measurement capability reportedly allows users to isolate and analyze solder joints and small components on populated circuit boards as well as other heterogeneous materials.

Thermo Fisher Scientific, Inc., Waltham, MA; www.thermo.com

Circle 106



Solid-state lasers

Melles Griot introduces single-frequency, low noise, diode-pumped solid-state lasers designed to provide options to traditional air-cooled krypton-argon ion lasers. The lasers produce up to 25mW at 561 nm and up to 15 mW at 473 nm. They also reportedly have a nearly circular (<math><1.1:1</math> aspect ratio), linearly polarized beam with an M^2 factor of less than 1.2. **Melles Griot**, Carlsbad, CA; www.mellesgriot.com

Circle 107



Power supply

Spellman High Voltage Electronics Corporation introduces its model VS100 high-voltage power supply, designed for precision electron beam applications such as semiconductor nanolithography, microoptics, and development mask work. According to the company, the product features ultra low ripple (less than 75 mV p-p, for 100 kV at 100 μ A), high stability, and excellent regulation parameters. **Spellman High Voltage**, Hauppauge, NY; www.spellmanhv.com

Circle 108



Scientific UV laser

The Spectra-Physics Lasers division of Newport Corp. has introduced the Explorer Scientific, a low-power intra-cavity tripled and actively Q-switched diode-pumped solid-state laser that delivers pulse energies of up to 120 μ J in the UV (349 nm). The Class 3B UV laser reportedly can be operated at frequencies ranging from single-shot up to a 5-kHz pulse repetition frequency at variable pulse energies. **Newport Corporation**, Irvine, CA; www.newport.com

Circle 109



Cuvette

The TrayCell cuvette from Hellma reportedly uses the surface tension of 4 μ L of sample to form a repeatable optical path of 1 mm \pm 0.02 mm. According to the company, it is compatible with most spectrophotometers, operates at temperatures ranging from 5 $^{\circ}$ C to 50 $^{\circ}$ C, and has a wavelength range of 190–800 nm. Applications include biotechnology, drug discovery, and forensics. **Hellma**, Plainview, NY; www.hellmaUSA.com

Circle 110



Mass spectrometer

The Agilent 6410 Triple Quad mass spectrometer is designed for femtogram-level sensitivity. It features a parameter-free integrator in the data analysis software that automatically calculates quantity and a single point of software control for both LC and MS instruments. **Agilent Technologies**, Palo Alto, CA; www.agilent.com

Circle 111



UV-Vis spectrophotometer

Hitachi's model U-2910 PC-controlled double-beam UV-Vis spectrophotometer includes features such as a 1.5-nm spectral bandwidth for EC compliance, 190-1100 nm wavelength range, ± 0.3 -nm wavelength accuracy, -2 to 3 Abs photometric range, ± 0.004 Abs (0.5–1.0 Abs) photometric accuracy, 10–3600 nm scan speed, 0.0003 A/h baseline stability (drift), and ± 0.00015 A/h noise level. The accompanying UV Solutions software reportedly offers wavelength, time scan, and quantitation. **Hitachi High Technologies America**, San Jose, CA; www.hitachi-hita.com

Circle 112



NIR miniprobes

Specac's Prospect fiber-optic transmission probes are designed for NIR process applications. Constructed of stainless steel and using gold/nickel bonding with sapphire windows, the probes are reportedly capable of operation at temperatures as high as 250 °C and pressures as high as 100 bar. The probes are available with pathlengths of 1, 2, and 5 mm with probe lengths of 100, 200, and 500 mm. **Specac Inc.**, Woodstock, GA; www.prospect-analytics.com

Circle 113



NIR analyzers

Foss NIRSystem's XDS MasterLab and XDS MultiVial NIR analyzers are designed for rapid nondestructive measurements of tablets, liquids, and solids. The MasterLab analyzer can be used for automated reflectance or transmission analysis of a tray of multiple tablets or vials. An integrated variable spot-size feature enables adjustment of the sample illumination based on the diameter of the tablets and vials being used. The MultiVial analyzer can be used for automated sampling without transmission for tablets. For more information, e-mail info@foss-nirsystems.com. **FOSS NIRSystems, Inc.**, Laurel, MD; www.foss.dk

Circle 114

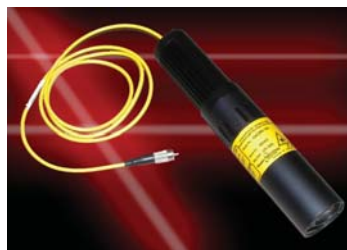


Concentric nebulizer

The C-Flow concentric nebulizer for ICP from Savillex Corporation is molded out of PFA and is chemically resistant to most matrices. The nebulizer is designed with a straight, fixed capillary and a one-piece gas port. According to the company, the nebulizer performs consistently at multiple flow rates and provides high sensitivity and low oxides. C-flow nebulizers are now available pre-cleaned and with autosampler probes.

Savillex Corporation, Minnetonka, MN; www.savillex.com

Circle 115



Laser diode module

The fiber-coupled DFB IQμ4x(760-5) laser diode module from Power Technology is designed for applications such as fluorescence, spectroscopy, interferometry, high-resolution printing, display, and microscopy. According to the company, at 760 nm, the module emits 5 mW of output power with a spectral width of 2 MHz. The module also features an on-board menu-driven micro-processor. **Power Technology, Inc.**, Little Rock, AR; www.powertech.com

Circle 116



Digital pulse processor

Amptek's PX4 reportedly combines a digital pulse processor, a power supply, a shaping amplifier, and a multichannel analyzer. It is compatible with the company's XR-100 detectors and detectors from other manufacturers. The processor is software-driven and has 24 programmable peaking times between 0.8 and 102 μ s. **Amptek, Inc.**, Bedford, MA; www.amptek.com

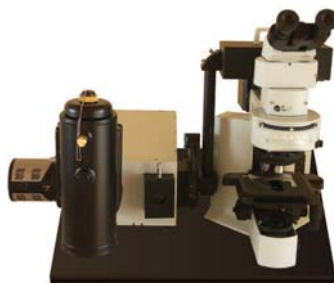
Circle 117



Compact spectrometer

B&W Tek introduces the model BTC651E spectrometer, which reportedly combines high efficiency optics, a back-thinned 2D CCD detector array, and an imaging spectrograph. According to the company, the product offers high throughput, and its high photometric sensitivity is beneficial to low-light spectral applications such as Raman or fluorescence. **B&W Tek, Inc.**, Newark, DE; www.bwtek.com

Circle 118



Raman spectrometers

The MonoVista CRS and the TriVista CRS Confocal Raman systems from PI/Acton are designed to offer both macro and confocal micro analysis capabilities in a single system, enhancing experimental flexibility and allowing switching between macro and micro modes. The company states that the integrated modular systems provide instant results and easy configuration for multiple applications, with integrated laser options available. **PI/Acton**, Trenton, NJ; www.piacton.com

Circle 120



Customizable polarimeter

The model P-2000 polarimeter from JASCO is designed to be a customizable polarimeter that can be equipped initially with various options and can also be upgraded in the field at any time. According to the company, the product offers a range of light sources including tungsten-halogen, sodium, and mercury lamps. As many as two light sources can be simultaneously installed in the instrument. **JASCO Inc.**, Easton, MD; www.jascoinc.com

Circle 121

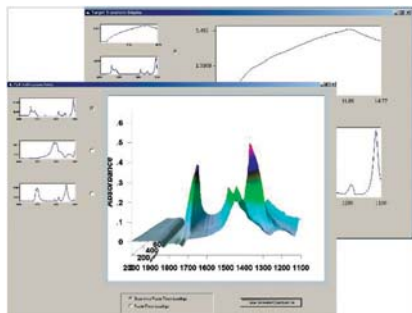


E-commerce web site

SPEX CertiPrep Group announces its e-commerce web site at www.spexcsp.com, designed to allow consumers to order products securely, check prices, check order status, download MSDS and certificate of analysis, and instantly access a live chat for technical assistance.

SPEX CertiPrep, Metuchen, NJ; www.spexcsp.com

Circle 119



Software

ReactionSleuth software from Remspec is designed for postprocessing of reaction monitoring datasets. The software works with multi-files in the spc format and offers PCA/Target transformation, peak-fitting capability, and 3D displays of real and synthetic datasets.

Remspec Corporation, Sturbridge, MA; www.remspec.com

Circle 122



Custom standards

Inorganic Ventures manufactures custom inorganic standards for applications including ICP, ICP-MS, AA, and IC. Standards are made according to user specifications and come with an extensive certificate of analysis that details NIST traceability, certified values, and trace impurities. Reportedly, the company can ship 99% of its custom solutions in three days or less. **Inorganic Ventures**, Lakewood, NJ; www.inorganicventures.com

Circle 123



Elemental analyzer

The Eagle III XPL micro-EDXRF spectrometer from EDAX is now available with an optional primary-beam-filter accessory that reportedly improves detection limits. The spectrometer uses capillary optics, CCD video imaging cameras, and a motorized xyz stage for non-destructive small-spot analysis correlated with video imaging. Features include simultaneous detection of elements ranging from Na through U, and little or no sample preparation requirements. Typical applications include forensics, failure analysis, coating thickness-composition measurement, quality control, and chemical imaging. **EDAX**, Mahwah, NJ; www.edax.com/

Circle 124



FT-IR spectrometer

Bruker Optics' VERTEX 80v vacuum FT-IR spectrometer is designed to provide high rejection of the interference from atmospheric gases, such as water vapor and carbon dioxide. Data acquisition is based on dual-channel 24-bit analog-to-digital converters integrated with the detector, which reportedly yield a high signal-to-noise ratio. According to the company, the instrument's linear air bearing interferometer allows a resolution $< 0.07 \text{ cm}^{-1}$. **Bruker Optics**, Billerica, MA; www.brukeroptics.com

Circle 125



Portable Raman spectrometer

Enwave's EZRaman-M field-portable Raman system is designed for use in forensic and security applications, surface-enhanced Raman spectroscopy, and educational and research laboratories. The system features a 785-nm frequency-stabilized laser and spectral coverage of $250\text{-}2300 \text{ cm}^{-1}$. **Enwave Optronics, Inc.**, Irvine, CA; www.enwaveopt.com

Circle 126



Fiber-optic extension

The 1-m FlexProbe fiber-optic extension from Ahura is designed for use with the company's FirstDefender handheld Raman spectrometer. The twist-on extension attaches to the laser aperture of the spectrometer. The fiber-optic extension uses the same nose cone and $3/4\text{-in.}$ working distance as the spectrometer and operates in standard point-and-shoot mode. **Ahura Corporation**, Wilmington, MA; www.ahuracorp.com

Circle 127



Multichannel modular system

Avantes' AvaSpec USB2.0 modular system for multichannel fiber-optic spectrometers can reportedly be configured as a single, dual, triple, quadruple, or multichannel instrument with as many as 127 spectrometer channels. According to the company, the simultaneous data sampling allows fast read-out and enables monitoring of pulsed light sources with different channels evaluating the same pulse. The spectrometers can be used in standalone mode if the microprocessor is loaded with application-specific standalone firmware.

Avantes, Boulder, CO; www.avantes.com

Circle 128

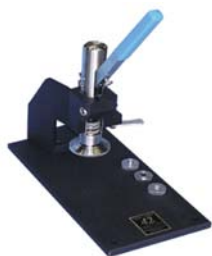


Table-top press

International Crystal Labs introduces the E-Z Quick Table Top press. It is constructed from stainless steel, chrome-plated steel, and anodized aluminum. According to the company, the press mounts vertically, which enables the use of body weight and shoulder muscles. The press uses the 7-, 4-, and 2-mm die sets that are used in the company's Quick Press and Port-A-Press presses.

International Crystal Laboratories, Garfield, NJ; www.internationalcrystal.net

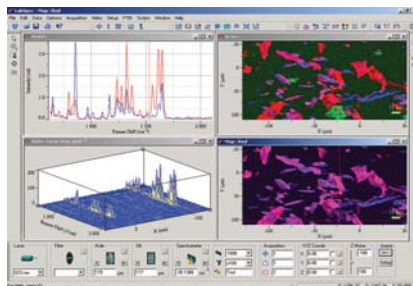
Circle 131



Magnetic resonance spectrometer

Varian introduces its model 400-MR magnetic resonance spectrometer, which is designed to give nonspecialists access to state-of-the-art methods for molecular characterization and quantitation. According to the company, the NMR spectrometer's compact footprint makes it easier to accommodate in small analytical laboratories in pharmaceutical, biotech, chemical, and academic environments. **Varian, Inc.**, Palo Alto, CA; www.varianinc.com

Circle 129



Raman software

LabSpec5 software from HORIBA Jobin Yvon is designed for use with HORIBA's Raman products, including the LabRAM ARAMIS, LabRAM HR, and T64000 triple spectrograph. According to the company, the software records Raman images in any shape or format at high speed, high spectral resolution, and high spatial resolution and can incorporate custom accessories such as FT-IR, mapping, temperature-controlled stages, and additional detectors. **HORIBA Jobin Yvon**, Edison, NJ; www.jobinyvon.com

Circle 132



PIXcel

The one detector for all your applications >>

X-ray detector

PANalytical introduces the PIXcel solid-state detector designed for XRD applications. According to the company, the detector contains more than 65,000 pixels, each $55 \mu\text{m} \times 55 \mu\text{m}$ in size. The detector can be mounted as one of the company's PreFIX interchangeable X-ray modules or positioned behind conventional point detector optics.

PANalytical, Almelo, The Netherlands; www.panalytical.com

Circle 130



Photomultiplier tube

The PHOTONIS Group announces the XP1322, a 13-mm (0.5 in.) round photomultiplier tube featuring a combination of high gain and low noise that covers the spectral range of 270–650 nm. The product is designed for applications such as scintillation counting, high-energy physics, life sciences, and bioluminescence. The product is also available in a photon counting grade model. **PHOTONIS Group**, Lancaster, PA; www.photonis.com

Circle 133



Vibratory disk mill

The model RS 200 vibratory disk mill from Retsch reportedly features a 1.5-kW stabilized plane drive that achieves grind sizes of 40–100 μm within seconds. Features include all-digital controls with memory for up to 10 grinding programs, one-button operation, automatic recognition, and speed adjustment from 1400 to 700 rpm with agate grinding sets. **Retsch**, Newtown, PA; www.retsch-us.com

Circle 134



Mercury analyzer

Buck Scientific's model 410 mercury analyzer is designed for the analysis of trace levels of mercury in drinking, surface, and saline waters, as well as domestic and industrial wastes. The instrument achieves detection limits of 10 ppt/absolute mass 0.0025 mg with a 400-mm flowcell. **Buck Scientific**, East Norwalk, CT; www.bucksci.com

Circle 135



XRF cups

Premier Lab Supply offers a variety of XRF cups designed primarily for liquid sample applications, but can also accommodate many homogenous powder solid samples for use with an x-ray instrument. **Premier Lab Supply, Inc.**, Port St. Lucie, FL; www.premierlabsupply.com

Circle 138



ICP-OES spectrometer

The Spectro Genesis from Spectro Analytical is reportedly the first and only ICP-OES spectrometer available with a complete set of factory calibrated methods for environmental and industrial applications, ready for use out of the box with an application package that includes the sample introductions system, sample preparation instructions, and method documentation. **Spectro Analytical Instruments**, Kleve, Germany; www.spectro.com

Circle 137

ICP-MS cones

Spectron offers standard nickel, platinum, and aluminum cones for all ICP-MS instruments with full technical support available. The cones are made to OEM designs, and platinum cones include refurbishing. The company also carries a line of other manufacturers' sample-introduction products, including nebulizers, torches, spray chambers, and multipliers. **Spectron, Inc.**, Ventura, CA; www.spectronus.com

Circle 139



Ion mobility spectrometry

The IONSCAN-LS by Smiths Detection is designed to detect and quantitate trace analytes using ion mobility spectrometry with two sample introduction methods: thermal desorption from a filter and high-performance injection. According to the company, the product can analyze samples over a concentration range of about three orders of magnitude.

Smiths Detection, Danbury, CT; www.smithsdetection.com

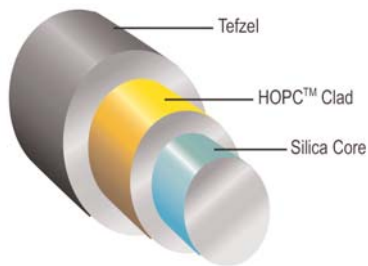
Circle 136



Lead sulfide detectors

The J13 Series of lead sulfide detectors from Judson Technologies is designed for operation in the 1–3.5- μm wavelength region. According to the company, the detectors are offered in flat plate cells, TO-style packages and thermoelectric coolers provide low temperature operation for increased sensitivity, longer wavelength operation, and temperature stability. **Judson Technologies**, Montgomeryville, PA; www.judsontechnologies.com

Circle 140



Multimode optical fiber

Fiberguide Industries manufactures the Hard Optical Polymer Clad multimode fiber, which features a high numerical aperture and a high core-to-clad ratio for use in UV-Vis and Vis-IR spectroscopy. According to the company, the hard cladding increases fiber strength and reduces static fatigue in humid environments, and also protects the fiber during buffer stripping to prevent fiber breakage. **Fiberguide Industries**, Stirling, NJ; www.fiberguide.com

Circle 141



Dual readhead encoding

The DSi dual SiGNUM interface encoder from Renishaw combines two SiGNUM SR readheads for high accuracy with an angularly repeatable and customer located propoZ reference position, which is unaffected by bearing wander or switch-off. According to the company, the encoder combined with the REXM ring offers better than +/- 1 arc second total installed accuracy. The encoder reportedly can operate at speeds as high as 4500 rpm and temperatures as high as 85 °C. **Renishaw**, Hoffman Estates, IL; www.renishaw.com

Circle 142



Identification software

Thermo Fisher Scientific announces BioWorks 3.3, their newly designed protein identification and quantitation software, which features automated quantitative analysis of iTRAQ, SILAC, and ICAT labeled samples, as well as label-free quantitation techniques. According to the company, the software removes unwanted spectra from the search, resulting in faster search times, allowing users to focus only on the proteins of interest. **Thermo Fisher Scientific, Inc.**, Waltham, MA; www.thermo.com

Circle 143

Literature



ICP application note

An application note from Teledyne Leeman Labs describes the biodiesel fuel analysis capabilities of the company's Prodigy ICP spectrometer. According to the publication, the spectrometer can determine as many as 70 elements in a sample simultaneously in under 30 s, and elemental content can be rapidly monitored throughout the entire processing cycle. **Teledyne Leeman Labs**, Hudson, NH; www.LeemanLabs.com

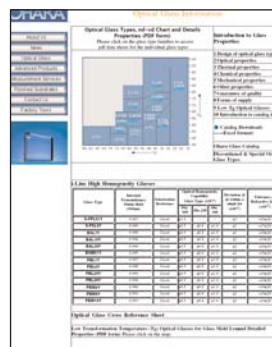
Circle 144



Elemental application notes

Application notes from HORIBA Jobin Yvon describe the analysis capabilities of copper and sulfur. According to the company, the first of these notes focuses on the accurate determination of carbon and sulfur in copper matrices. The application notes can be downloaded at www.jobinyvon.com/elemental. **HORIBA Jobin Yvon**, Edison, NJ; www.jobinyvon.com

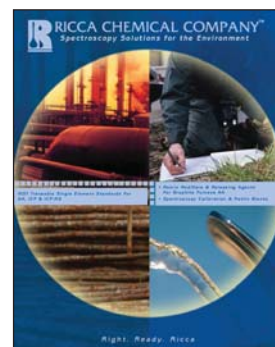
Circle 145



Online catalog

Ohara's online catalog features over 112 environmentally safe glass types that are free of lead and arsenic. Ohara produces more than 300 tons of high-quality optical glass per month, and it is available as strip, slab, cut blanks, pressings, and other forms. **Ohara Corporation**, Branchburg, NJ/Rancho Santa Margarita, CA; www.oharacorp.com

Circle 146



Spectroscopy brochure

Ricca Chemical Company has released its 2006–2007 Spectroscopy Solutions Brochure featuring the company's products for use in chemical testing solutions for the environment. Among the products are NIST-traceable single-element standards for AA, ICP, and ICP-MS; matrix modifiers and releasing agents for graphite furnace AA; and spectroscopy calibration and matrix blanks. **Ricca Chemical Company**, Arlington, TX; www.riccachemical.com

Circle 147