

# NEW PRODUCTS



**Magna-IR series of high-performance FT-IR spectrometers** operate under Windows using OMNIC software. Options include spectral ranges in the near-, mid-, and far-IR regions; dual-detector optics; a dual external beam; and a DSP-driven interferometer that controls all scan parameters. Nicolet **404**

## Instrumentation

**HPLC.** Model LC1150 quaternary multisolvent pump can be used to deliver isocratic solvent compositions or can be programmed to run gradient methods using up to four solvents. Solvents are delivered with an accuracy of  $\pm 1.0\%$  of the flow setting and with a precision of  $\pm 0.1\%$ . Anspec **401**

**GC.** Model A600 collects and concentrates VOCs from solid foods, beverages, or pharmaceuticals for gas chromatographic analyses of residual solvents, flavor and aroma compounds, essential oils, and off-odors. Analysis of organic volatile impurities in pharmaceutical compounds complies with USP method 467. CDS Analytical **402**

**LC.** Low-pressure LC systems include a portable, notebook-sized 386SX computer for gradient programming and system control, menu-based software for dual-channel data handling, and a UV-vis detector with 254- and 280-nm wavelengths. (Wavelengths from 214 to 660 nm are available.) Isco **403**

**Moisture measurement.** KFS-186 Karl Fischer aquametry system

can be used with any pH meter to determine moisture in foods, grains, paper products, paints, petroleum products, drugs, and chemicals. Moisture ranges from 1 ppm to 100% can be measured, and measurements conform to ASTM and federal specifications. Lazar **405**

**Electrophoresis.** Electro-4 horizontal gel system allows up to four agarose gels to be run in the gel tank at one time. Adjustable feet and a leveling bubble ensure even migration. Electrode height is adjustable for minimizing buffer requirements when fewer than four gels are run. Midwest Scientific **406**

**Fluorescence detector.** Model FD-400 programmable fluorescence detector features timed-event methods; RS-232 communications; scanning of excitation and/or emission monochromators; and programmable auto-zero, range, and scan rate functions. The detector is designed for applications in which excitation and emission wavelengths change during an experiment. Groton Technology **407**

**HPLC.** SEDEX 45, an evaporative light-scattering detector for HPLC and SFC that can be used with gra-

dients and with UV-absorbing solvents, produces no solvent-front peaks or negative peaks and can eliminate the need for postcolumn derivatization or detection in the far-UV ( $\leq 200$  nm) range. Normal operating temperature is  $40^\circ\text{C}$ ; detection limits are in the nanogram or subnanogram range, depending on the type of analyte. Richard Scientific **408**

**Ion chromatography.** SRS (self-regenerating suppressor) is a post-column device that enhances conductivity detection by 2 orders of magnitude. Autosuppression technology allows the system to regenerate itself continuously, using water and electricity; the water supply can be drawn from recycled eluent. Dionex **409**

**GC/MS.** Saturn II CI accessory allows the GC/MS system to be switched between EI and CI modes in the same or in alternate chromatographic runs. The CI mode provides molecular weight confirmation and positive identification of compounds with undifferentiated EI spectra. Varian **410**

**SFE.** HP 7680T supercritical fluid extractor is used in the preparation of solid and semisolid samples for the pharmaceutical, environmental, and food and flavor industries. A series of eight samples can be run automatically under different conditions for automated methods development or under the same conditions for high throughput. Hewlett Packard **411**

**FT-IR spectroscopy.** IFS 120 M transportable solar observation and emission FT-IR spectrometer has a removable scanner and can be interfaced with a telescope for remote sensing. Features include two scanner lengths; optics that can be purged, desiccated, and sealed; and a glowbar source and space for a 10-cm gas cell for calibration. Bruker **412**

For more information, please circle the appropriate numbers on one of our Readers' Service Cards.

**FT-Raman spectroscopy.** Bench-top FT-Raman spectrometer features a 60° Michelson interferometer, a white-light source for sample alignment, remote sample position manipulators, a computer-controlled aperture wheel and laser-power attenuator, a laser-power meter, interchangeable pin-mounted sample holders, and a standard cooled indium-gallium-arsenide detector or optional cooled germanium detector. Resolution of up to  $0.5\text{ cm}^{-1}$  can be achieved. Bio-Rad 413

**GC.** Designed around Autosystem GC technology, refinery gas analyzer Model 1001 measures refinery-type gases and similar gaseous mixtures with separations of all light-saturated and olefinic hydrocarbons, hydrogen, hydrogen sulfide, and fixed gases. Minimum measurable limits (by volume) are 1% for hydrogen, 500 ppm for hydrocarbons and fixed gases, and 0.5% for hydrogen sulfide. Perkin Elmer 414

**Particle size analysis.** Multisizer IIe counts and sizes up to 5000 particles per second. The instrument features editing of pulses generated by particles that do not pass directly down the center of the aperture; this feature is useful for analyzing very narrow size-distributed materials for which the nonaxial flow effect could artificially broaden the size distribution. A resolving power of 25,600 channels allows detection of particles ranging from 0.4 to 1200  $\mu\text{m}$  and detection of a volume difference as small as  $0.05\text{ }\mu\text{m}^3$ . Coulter 415

**LC-MS.** LC-MS Profile, designed to provide continuous sample analysis in routine or research applications, features the Mach 3 control, acquisition, and processing system. The "open access" LC autosampler allows addition of samples during a cycle without aborting the run. The standard system has a particle beam interface that can produce EI and CI spectra. Kratos 416

**Metals analysis.** Model 4800 dissolved metals analyzer uses anodic stripping voltammetry to measure part-per-billion concentrations of toxic metals. Pb, Cd, Cu, Zn, As, and Hg can be measured at concentration ranges of 1 ppb to 10 ppm. The instrument plates dissolved metals from solution onto an electrode by applying a negative potential. The potential is then ramped in the positive direction, and the deposited metals are stripped back into solu-

tion. The current produced as each metal goes back into solution is then measured. Ionics 417

**Water analysis.** Model 3130 Vista VOC continuous water analyzer determines trace levels (concentrations in the low-ppb range) of VOCs in plant process influent and effluent, noncontact cooling water, clean water used in production, and municipal water. Methylene chloride, trichloroethane, tetrachloroethylene, and benzene can be measured. ABB Process Analytics 418

## Software

**Plotting and data visualization.** Tecplot software provides integrated 1D, 2D, and 3D surface-plotting capabilities for drawing meshes, vector fields, contours, and light-source shading. The program can be used to create, display, manipulate, and examine scientific and engineering data. Amtec Engineering 419

**FT-IR spectroscopy.** Several thousand spectra of compounds such as polymers, surface-active agents, and standards have been added to the FT-IR digital database. The database is searchable at  $4\text{ cm}^{-1}$  data spacing, a feature that provides greater discrimination among spectrally similar compounds. Bio-Rad 420

**Microplate analysis.** SOFTmax microplate analysis software, with a mouse-driven interface, is available on both Windows and Macintosh platforms and can be used for ELISA testing; cytoproliferation, cytotoxicity, neutrophil activation, and enzyme kinetic studies; and endotoxin detection. Molecular Devices 421

## Manufacturers' Literature

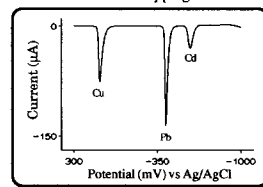
**Newsletter.** "NUS Analytical Control," Vol. 17, No. 1, discusses assessing laboratory QC reports. Topics include analytical process and sample matrix checks, analytical reports, and limits of detection (including EPA definitions for terms relating to detection limits). 4 pp. Halliburton NUS 422

**Osmometer.** Bulletin describes the Model 833 vapor pressure osmometer, which has a working molecular weight range of 100–25,000 Da. Use of a vapor pressure osmometer for determining molecular weight, speci-

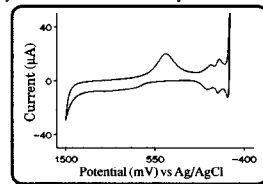
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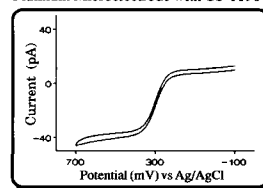
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