



**HP 5890 Series II Plus gas chromatograph** has four auxiliary electronic pressure control channels in addition to two standard channels dedicated to inlets. The four auxiliary channels provide control for carrier gases, reagent gases, detector makeup, and fuel gases; control flows for sample introduction devices such as headspace samplers and purge-and-trap units; and permit larger injection volumes in splitless injection. A gas-saver mode reduces carrier gas consumption during off hours and controls split vent flow. Hewlett Packard **402**

## Instrumentation

**Spectrophotometry.** Fiber Optic Multiplexer accessory for Cary 4/5 UV-vis-near-IR spectrophotometers is designed for sample reflectance and transmission measurements in remote locations. Several accessories can be used with one spectrophotometer. The accessory contains seven fiber-optic channels in configurations for UV-vis, vis-near-IR, or a combination of the two for the full light range. It is mounted on a motor-driven plate that can be accessed from Cary software and programmed for measurement protocols. Varian **401**

**MS.** BioApex mass spectrometer contains both ES and MALDI modes for

FT-MS of proteins, carbohydrates, and other biopolymers. The spectrometer provides mass resolution  $> 10^5$  at fwhm and mass measurements accurate to the low-ppm range for masses up to 20 kDa. Other options for the spectrometer can be used for MS<sup>n</sup>, FAB, pulsed SIMS, cf-FAB/SIMS, GC/MS, and LC/MS. Bruker **403**

**Sample digestion.** SpectroPrep, an automated continuous-flow microwave digestion system, allows unattended sample preparation for elemental analyses. The system can use acid concentrations as low as 5–10% for improved recoveries and reduced contamination risk. Sample temperature is monitored, and pressure and collection volumes are controlled for

reproducibility. The computer-driven system is self-cleaning and can store  $> 1000$  sample digestion protocols. CEM **404**

**Densitometry.** FluorImager 575 scans fluorescence-labeled samples such as DNA or protein electrophoresis gels and blot membranes, TLC plates, and microtiter plates for visualization and quantitation of analytes. The system has two-channel detection capability for simultaneous measurement of standards and samples and displays images on a color monitor. Molecular Dynamics **405**

**DNA analysis.** TE 90 GeneSweep sequencing gel transfer unit transfers DNA bands electrophoretically to nylon membranes for standard or multiplex sequencing, genetic mapping, or typing. The system sweeps a spring-loaded positive electrode across a semi-dry gel-nylon membrane stack resting on a negative electrode platform, and the sweep arm adjusts to stack thickness for even electroblotting in  $\sim 10$  min per gel. Hoefer **406**

**MS.** HAL ion desorption probe is a quadrupole MS system configured with ion extraction optics and an ion counter with a range of  $1-10^7$  counts/s. The system can detect positive, negative, and neutral species generated in ultrahigh vacuum surface analysis techniques, and it can be used for thermal desorption methods where neutral species are analyzed by postionization. Ion energy distributions are determined by retarding field techniques, and TTL or ECL outputs with input pulse gating allow TOF measurements. Hidden Analytical **407**

**HPLC.** Model 7980 HPLC column temperature controller operates in a temperature range from ambient up to 99 °C with temperature stability of 0.2 °C. It contains a heated valve compartment with an optional injection valve, modular heating blocks,

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**Flame photometric detector for GC** contains dual-wavelength and dual-photomultiplier functions for simultaneous determination of sulfur and phosphorus in eluates with a single sample injection. The detector contains a ceramic ignitor and can be built into a GC system or can stand alone as a self-contained tandem FPD. SRI Instruments **408**

and an LCD display, and includes automatic temperature cutout. Jones Chromatography **409**

**Light scattering.** PL-LALS low-angle light-scattering system can be used as an on-line gel filtration detector to provide molecular weights and concentrations of proteins and protein aggregates, polysaccharides, and nucleic acids without column calibration. The system contains an LALS detector and a differential refractometer in a single unit. Trace concentrations of high-MW species such as protein aggregates can be detected with the unit, which provides specific refractive index increments for each protein. Polymer Laboratories **410**

## Software

**GC/MS.** BenchTop/PBM v3.0 is a spectral library search system for MS. The upgrade contains enhanced search algorithms for unknowns with few peaks or low-mass base peaks as well as spectral averaging and improved background subtraction. The software runs searches on up to eight user libraries and the Wiley Registry simultaneously and

restricts searches to reference spectra in a user-specified MW range. Up to four spectra can be displayed simultaneously, and ion chromatograms can be shown alongside the TIC or as an overlay. The software runs under Windows 3.0 or higher and supports more than 30 commercial GC/MS data file formats. Palisade **411**

**Statistical analysis.** Minitab Release 9.0 statistical software for Windows includes mouse-controlled graphics capability for color, font, and size selection as well as manipulation of plotting features such as axis labels, tick marks, grids, lines, and bars. The software performs multivariate ANOVA and factor analysis and contains upgraded quality control functions, including Shewhart control charts, a process capability statistics macro, and cause-and-effect diagrams. Experimental design functions include Box-Behnken and central composite response surface designs. Minitab **412**

**Chemical structure editing.** Kekulé v1.1 software uses automatic structural feature recognition to interpret scanned images of chemical structure drawings and eliminate the need for manual redrawing. The software can find structures embedded in text and queries the user for confirmation of ambiguous features. Scanned images are converted to computer-manipulable structures that can then be edited and exported into databases, such as ISIS and Beilstein, or structure analysis or word processing programs. The software operates under MS-DOS and Windows 3.1 on 486 PCs. PSI **413**

## Manufacturers' Literature

**HPLC.** Brochure presents materials, specifications, and price tables for Nucleosil HPLC columns with capacities ranging from microbore to preparative scale. Sample chromatograms for a variety of applications are presented with information on column and operating parameters. 8 pp. Phenomenex **414**

**CE.** Application note describes a dynamic sieving technique for separating DNA fragments > 1 kb in length by CE. The note presents the use of entangled polymers as a mobile sieving agent in the running buffer to separate large DNA strands by their tertiary structure in the capillary

tube. The method is compared with gel CE, and sample electropherograms of ladder separations are presented. 4 pp. J&W Scientific **415**

**Software.** "LabView Technical Resource" newsletter for LabView users appears quarterly and contains articles on programming, techniques, and case studies, as well as hardware and software topics for the development of systems with data acquisition. Each issue includes a disk of LabView VIs and utilities for methods described in that issue. National Instruments **416**

## Catalogs

**Specialty gases.** Catalog provides specifications for pure gases in eight grades of purity from 100 ppb to 1000 ppm, gas mixtures for GC and for special purposes such as electron capture and clinical blood gas analysis, calibration and standard mixtures for environmental compliance, gases for electronics, and equipment. A cylinder conversion chart, materials compatibility tables, conversion factors, setup illustrations, and safety data are included. 168 pp. MG Industries **417**

**GC.** Catalog lists fused-silica capillary columns with bonded stationary phases and contains extensive applications information with sample chromatograms for clinical and environmental methods; high-temperature methods; and determination of flavors and fragrances, FAMES, petrochemicals, and steroids. Specification tables and information on accessories are included. 140 pp. Quadrex **418**

**Used and new equipment.** Catalog of reconditioned and new equipment includes Hewlett Packard instrumentation for GC, GC/MS, LC, and UV-vis spectroscopy as well as concentrators and data-handling systems for purchase, rental, or lease. Alpha Omega Technologies **419**

**Chromatography.** Catalog features products for GC, HPLC, TLC, and sample preparation from more than 70 manufacturers. Also included are products for sample cleanup, reagents and standards, syringes, fittings and valves, books, and repair and maintenance supplies. Specification tables and price lists are illustrated with photographs, drawings, and sample chromatograms. 400 pp. Cobert **420**