



Scanning Ion Microscope

Model MIG100 offers high-resolution chemical imaging and rapid, three-dimensional depth profiling. Insulators and conductors are equally able to be analyzed without surface preparation of a conducting material. Elements from hydrogen to uranium may be analyzed with sensitivity to less than 1 part per million. This analytical instrument may be supplied complete or as a component for the user's vacuum chamber (Auger, SAM, or ESCA). VG Instruments. Circle 598.

Accessory for FTIR Analysis of Liquids

Circle provides smooth sample flow for easy quantitative or qualitative analysis of aqueous or otherwise opaque solutions with an FTIR spectrophotometer. Circle has an insoluble zinc selenide cylinder with conical ends sealed into the sample chamber. The circular beam optics match the FTIR beam with minimum vignetting. Built to avoid leaks, it withstands pressures up to 3 atmospheres with a standard glass body cell and higher pressures with a stainless steel cell. Barnes Analytical. Circle 599.

Spectrophotometer

The Spectronic 1001 is a single-beam instrument. A fraction of the available light is used as a reference beam to cancel the effect of any drift created by the light source. It features automated execution of analytical programs with up to 30 sets of the user's own parameters. The wide ultraviolet-visible wavelength range provides versatility and high ener-

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—RICHARD G. SOMMER

gy is available to analyze even murky samples without dilution. Peaks are located automatically and multipoint curves are generated and stored by the microprocessor. Time is saved by automatic multiwavelength testing and calculation of absorbance ratios and absorbance differences (one time or kinetic). There is a plug-in interface to allow two-way communication with a computer. Bausch & Lomb. Circle 600.

Spectrometer

SpectraSpan VI combines a computer-controlled echelle scanning monochromator with a direct-current plasma source to determine elemental components in liquids and gases by plasma emission. Software features cursor-prompted instruction. Samples with high total dissolved solids may be analyzed. Echelle optics minimize spectral interference and require few analyte corrections. Accessories include an Auto Sampler, Microsoft BASIC software, a standard or deluxe printer, computer-selected dual-photomultiplier detection, and a work station. SpectraMetrics, a subsidiary of Beckman Instruments. Circle 601.

Automated Liquid Chromatography

The LC/934 combines an easy-to-use chromatograph and a computer with high-resolution graphics. The chromatograph features a pulse-free pump, ternary-gradient capability, and a variety of sensitive detectors. With an automatic sampler, the instrument may be operated unattended. The computer features a key pad and application software. The 12-inch cathode-ray tube displays multiple chromatograms in real time or from stored data. User programmable keys permit interactive manipulation of the data. With a chromatography applications program, up to four chromatographs may be controlled at once. IBM Instruments. Circle 607.

NMR Spectrometers

The AM series includes microprocessor control of console operation, the Aspect 3000 data system with large memory capacity, Fourier-transform processor, and a fast eight-color raster scan display processor and plotter. Accessories include a multinuclear observation unit, a computer-controlled dual hydrogen/carbon-13 probe/amplifier, and a remote data-processing station. The AM system is available at frequencies from 200 to 500 megahertz. Bruker Instruments. Circle 602.

Specimen Preparation for X-ray

Diffraction

Model 620-00 provides tools and accessories to prepare specimens for camera and diffractometer work. All items are stored in bench compartments. The Pyroceram work surface is heat-, chemical-, and abrasion-resistant. The surface is also removable for cleaning. Custom and specialty tools are provided for optimum diffraction work. Buhke Scientific. Circle 603.

Filter System for Gas Chromatograph

The Gas-Clean filter system enables the operator to replace filters in seconds without column cooling or disconnection of gas supplies. The base connector plate is attached in the gas line and may be wall- or bench-mounted. The filter is mounted on the base connector plate with a hand-tightened bushing. Check valves, O-rings, and dust filters in the base plate prevent contamination during filter changes. A positioning post ensures proper orientation and the new filter is simply pressed into position. The seal at the bottom of the filter is punctured by the valves which open when the bushing is tightened. Filters include an indication moisture filter for carrier gases. Chrompack. Circle 604.

Gas Chromatograph—Mass Spectrometer

The 8200 series GC/MS supports analysis of complex samples with high molecular weights. Resolution, mass range, sensitivity, and scan speed are all in the high-performance range. The 8200 series has a combined EI/CI ion desorption chemical ionization, and combined field desorption/field ionization/electron ionization. The reverse Nier-Johnson design allows metastable ion analysis in

both the first and second field-free regions. The magnetic sector is a fully laminated H-shape magnet for high scan speeds and dynamic focusing. The Incos data system operates in a single-terminal, single-acquisition mode or in a dual-terminal, dual-acquisition mode. It also operates in a true priority interrupt foreground/background mode. Finnigan MAT. Circle 605.

Chromatography Data System

Model 446 is based on the HP 86 desktop computer with 12-inch cathode-ray tube, dual floppy disks, and a printer-plotter. Software includes data storage, reconstruction, reintegration, recalculation, and automatic branching to user programs. Quantitation features area percent, internal and external standards, and naming of up to 300 peaks with reference peak normalization. The 446 works with any commercial gas or liquid chromatograph and with any common autosampler. Nelson Analytical. Circle 610.

Pyrolysis Mass Spectrometer

Model 5000 is a Curie point instrument designed for optimum pyrolysis mass spectrometry. However, it retains capability for easy conversion to more conventional (gas inlet or direct probe) modes of mass spectrometry. Complex intractable molecules may be characterized rapidly. Contamination is minimized by the open design of the electron impact ion source. The Curie point pyrolysis inlet provides readily repeatable temperature profiles to ensure quantitative reproducibility. A removable gold-coated expansion chamber serves as a buffer between reactor and ion source. Model 5000 also features a modular design, so the operator may convert to other modes of analysis with ease. Extracuclear Laboratories. Circle 606.

NMR Spectrometer for Solids

The S-100 incorporates cross-polarization/magic angle spinning techniques and high power dipolar decoupling capabilities for routine carbon-13 NMR studies of solid materials. High RF power and efficient probe coil design enhance sensitivity and resolution. The S-100 uses a 2.3-tesla superconducting magnet. Sample changing is simple and reliable. Sample spinning is accurate and repeatable. The probe produces spectra free of back-

ground interference. The operator sets sequences and selects experimental parameters for routine operation. Nicolet Analytical Instruments. Circle 611.

Variable Wavelength Detector

Model LC-85B ultraviolet-visible detector offers an optional 1.4-microliter flow cell with the same 6-millimeter pathlength and virtually the same light throughput as the standard 8-microliter flow cell. Both offer performance free of the effects of flow, refractive index, and temperature. The LC-85B with the optional flow cell is especially suited for use with both small-bore columns and high-resolution/high-speed columns. Full-scale sensitivity of the LC-85B is 0.005 absorbance units. Perkin-Elmer. Circle 612.

Dual Variable Wavelength Detector

Model 788 uses two user-selectable ultraviolet-visible wavelengths to analyze chemical compounds of similar molecular structure. Chromatographers may resolve overlapping peaks without changing analysis parameters. Monitoring at two wavelengths allows comparison of sample constituents based on absorbance, absorbance ratio, and absorbance sums or differences. Detection occurs in a single cell. The 788 employs a deuterium lamp; a high-pressure (4000 pounds per square inch) flow cell; and a variable-angle, concave grating; and two photodiode pairs (one adjustable). It measures wavelengths between 190 and 750 nanometers. Micrometrics Instrument. Circle 609.

Ultraviolet-Visible Spectrophotometer

The DW-2C is a double-beam, dual-wavelength instrument with integral data processing. Features include digital readout, automatic correction of baseline, n th derivatives of spectra and kinetic reaction data, 14 spectral storage locations, memory display on any oscilloscope, and plotting on an integral recorder. The DW-2C will do digital filtering, smoothing, averaging, and logarithms, and it will store kinetic reactions from 75-millisecond to 25-minute full scale. Operating modes include dual-wavelength, dual-wavelength scanning, rapid kinetics, and user-defined X -axis modes. In the double-beam mode, a single beam is chopped by a rotating mirror. SLM/Aminco. Circle 618.

Literature

Blood Collection by Skin Puncture describes approved standard technique, equipment, sites, depth of puncture, container, and other aspects. National Committee for Clinical Laboratory Standards. Circle 590.

EIA Dilutions for Peroxidase Conjugated Antisera gives working dilutions for 17 antisera. An extensive bibliography is available. Research Products Division, Miles Laboratories. Circle 593.

Cytocentrifuge is devoted to the Cytospin 2 benchtop instrument for rapid processing of small samples. Shandon Southern Instruments. Circle 594.

Oxygen Equilibrium Curve Analyzer describes the Hem-O-Scan analyzer which offers a rapid, easy method that requires only small samples. SLM Instruments. Circle 595.

Chromatography Data System Selection lists criteria for the intelligent selection of appropriate equipment to meet individual needs in liquid chromatography. System Instruments Corporation of America, Circle 596.

Temperature Calibration Baths includes 14 models for laboratory applications. Techne. Circle 597.

Thin Electrode describes a device 8 inches long by $\frac{1}{4}$ inch in diameter for pH readings in narrow tubes. Fisher Scientific. Circle 627.

Catalysts gives applications references and classification by starting material, end product, and reaction type of homogenous and heterogenous catalysts. Spex Industries. Circle 628.

Research Chemicals offers hundreds of substances of use in multiple disciplines. It includes fluorescent dyes, biological buffers, and diagnostic chemicals. Research Organics. Circle 629.

Biochemical and Organic Compounds for Research includes diagnostic and clinical reagents, standards and controls, kits, and equipment. Sigma Chemical. Circle 630.

Silicon Compounds Register and Review covers structural, physical, toxicity data on over 800 organosilanes. It also provides data on over 200 silicones. Pettrach Systems. Circle 631.

New Titles includes 85 volumes available spring 1983 from *Basic Physics of Radiotracers to Total Parenteral Nutrition*. Eighteen of them are new entries in the "Handbook" series. CRC Press. Circle 632.

Nuclear Magnetic Resonance is devoted to a research grade Fourier-transform system and its associated software from an applications standpoint. Nicolet Magnetics. Circle 634.

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