

### Secondary Ion Mass Spectrometry

Secondary Ion Mass Spectrometry (SIMS) uses a beam of low-energy ions to erode atoms from a sample surface into a vacuum where they are analyzed in a mass spectrometer. SIMS detects all the elements and isotopes with a sensitivity typically in the range of parts per million. Chemical information is also provided in the characteristic fragmentation patterns obtained in the mass spectra. The BOSS is a bolt-on SIMS system which is ideal for addition to an existing surface analysis instrument or a purpose-built vacuum system. Two versions of the BOSS are available depending on the choice of ion gun. Submicron Imaging SIMS is obtained using a scanning 10-keV microfocused gallium ion gun. This facility may be used to obtain SEM and chemical maps as well as surface mass spectra and concentration-depth profiles. Alternatively, the use of an argon ion gun or fast atom source is available for Static SIMS analysis. The BOSS is mounted on a 200-mm (OD) flange and comes complete with a 300-amu quadrupole mass spectrometer, ion gun, electron flood gun for charge neutralization, oxygen dosing and a secondary electron detector. The associated electronics are rack-mounted and output is either analog or under computer control. VG Scientific. Circle 526.

### Fourier Transform Infrared Spectrometer

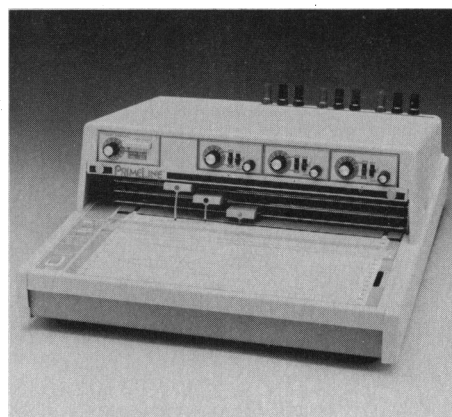
The Polaris is designed to bring FT-IR to laboratories which previously have had only the capacity for dispersive x-ray spectroscopy. No external computer is required. A novice can learn the operating procedures rapidly. The Polaris features push-button parameter selection, calibration, data collection, and plotting from an integral control panel. The internal software is menu-driven and one 68000 microprocessor controls all onboard operation. The Polaris has 0.5  $\text{cm}^{-1}$  resolution and 0.01  $\text{cm}^{-1}$  wavelength accuracy. The large sample compartment

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

will accommodate a wide variety of sampling procedures. Large cube-cornered optics with beam-centering mirrors give absolute interferometer stability. The Polaris is fully expandable. Resolution may be varied and different detectors may be added. Mattson Instruments. Circle 530.

### Flatbed Recorders

The PrimeLine R-0X series of flatbed laboratory recorders offers solid-state technology. R-0X PrimeLine recorders use 250-mm chart paper with all pens overlapping to write the full chart width. Each channel



(pen) will measure signals from 1 millivolt full scale up to 200 volts. Features include a calibrated 100 percent zero suppression switch and a variable attenuator for measuring signals between standard ranges. Pen speed is faster than 0.5 second full scale. Accuracy exceeds 0.25 percent full scale with repeatability better than 0.1 percent full scale. The R-0X series offers the user CMRR of 140 dB at 50/60 Hz. Additional standard features include integral quartz controlled chart drive with 14 switch-selected speeds from 1 cm/hour to 60 cm/min; remote controlled features include a superimposed event marker on each channel, simultaneous electric pen lift, chart start/stop, and external chart drive. Soltec Distribution. Circle 528.

### Coagulation Analyzer

Model 110P, a fully automated coagulation instrument, operates on microsamples of plasma. This capability proportionately reduces the quantity of reagents and controls consumed, which results in savings for the user. Model 110P provides for the direct entry of PT and APTT concurrently, in any order and in any quantity without limiting efficiency of throughput. This eliminates the need to batch samples by test type. Samples

may be entered at any time regardless of the type of test in progress. Model 110P performs all routine coagulation tests including fibrinogens, thrombin times, and factor assays. Its ability to perform with reduced consumption of reagents and controls is the result of a submerged vertical optical detection system (SVO) that utilizes a near infrared light source. The vertical orientation of the optical system enables Model 110P to observe 360° of the clot during its formation. Additional reagent efficiency is attained with Model 110P by means of its pressurized reagent delivery system. This method for dispensing microvolumes of reagents eliminates conventional pumps. Bio/Data. Circle 527.

### Energy Dispersive X-ray Fluorescence Analysis

Model EX-2040 combines a personal computer with a 40-kV x-ray tube and electronics to produce a versatile, economical x-ray fluorescence analysis system. Utilizing a plug-in board which converts the IBM PC into a full feature multichannel pulse height analyzer, the menu-driven user-friendly software permits analysis of every element from sodium to uranium. The computer keyboard allows the user to program different operating parameters for each of ten samples in the sample tray. A leaded glass viewing port allows samples to be observed during analysis. Data are displayed in real time on a monitor. Since the personal computer is not dedicated, it is available for other tasks when the system is not in use. The Nucleus. Circle 533.

### Inserts for Shaking and Vortexing 96-Well Plates

Mechanized, unattended vortexing and shaking of 96-well plates for clinical, industrial, and research laboratories is now possible with inserts for the Vortex Genie 2 mixer. These inserts, which save labor and time, are useful for microtitration, tissue culture, serology, and other assays. They are among six interchangeable attachments that are used with the Genie 2 mixer for unattended shaking and vortexing. The single-tiered microwell plate is designed for mixing under 30 minutes; a two-tiered version of the insert facilitates long-term unattended mixing. Both inserts, which are made of high-density foam, are easily pressed into and removed from the plates without the use of tools from a special 6-inch thermoplastic platform head attached to the mixer. Scientific Industries. Circle 529.

# Science

## Products & Materials

*Science* **233** (4759), 117.  
DOI: 10.1126/science.233.4759.117

**ARTICLE TOOLS** <http://science.sciencemag.org/content/233/4759/117.citation>

**PERMISSIONS** <http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

---

*Science* (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works. The title *Science* is a registered trademark of AAAS.