

# newly on the market

These descriptions are prepared by the staff of *Nature* on the basis of material provided by manufacturers. There is a Reader Enquiry Form on the page facing the inside back cover.

**Automated X-ray powder diffractometer.** Philips. The APD 10 comprises a Philips 3 kW generator with vertical goniometer equipped with graphite monochromator and 35-sample changer, plus associated controls and chart recorder; the additional automation facilities are controlled by a mini-computer using plain language instructions via a teletypewriter. A dual station cassette unit enables measurement data to be collected for off-line processing on a larger computer. Standard programs are available. The APD 10 enables routine work to be done overnight or at weekends. Applications cover geology, mining, steel production, petro-chemicals, paint and air pollution.

Circle No. 43 on Reader Enquiry Form

**Double beam atomic absorption spectrophotometer.** Pye Unicam Ltd. The SP2900 has both peak height and peak area measurement which can be remotely initiated. The timing for peak height measurement is from 0-99.9 seconds in 100 msec steps and peak area integration is over a 4 or 10 second period. The built-in lamp turret keeps four pre-focussed lamps aligned, powered and ready to work. Lamp selection is optical. The SP2900 has aircraft-style, 7-bar, bi-polar illuminated digits. The range is  $-0.05$  to  $1.999A$  with a switchable decimal point and double over-range indication. Readout is in absorbance, concentration or emission units and digital update is  $2.5 \times$  every second. A concentration calculator helps produce fast and accurate results with a single operation of curvator and scale expansion controls using just two standard solutions. The single curvature control is independent, wide-ranging and does not affect zero. Calibrated scale expansion is from  $0.2 \times$  to  $50 \times$  (analogue and digital). The background correction accessory provides automatic, simultaneous correction for high background absorbances—particularly important when using electro-thermal atomisation techniques. The SP2900 corrects for 1.5A of background to better than 1%.

Circle No. 44 on Reader Enquiry Form

**Linear displacement monitor.** Rofin Ltd. High resolution dual or single axis light spot position sensing system includes one- or two-axis position resolution to 0.0001 inch, independent of zero and sensitivity control for each axis, analogue output with frequency response to 3KHz and position sensitivity independent of light spot size when used with a Helium-Neon or other visible C.W. laser. Position sensitivity is dependent on the detector type used, incident light power and the sensitivity setting. Applications include: flatness . . . positioned over a surface, the monitor gives a meter indication of the deviation from flatness at any point; auto-collimating . . . using spherically corrected lenses, the displacement display can measure pitch and roll angles; motion monitoring . . . with the high frequency analogue output and linearity of output, the monitor can measure vibration rate and amplitude.

Circle No. 45 on Reader Enquiry Form

**Immersible molecular separator.** Millipore. Sized to handle volumes between 1 and 100 ml, the separator is ideal for concentrating proteins, viruses and colloids, removing salts, buffers and



Immersible molecular separator

solvents, deproteinising samples and separating unbound ligands. The unit can be reused after a simple cleaning operation. The device is lowered into the solution to be processed and is then connected to any convenient vacuum source. Filtrate passes through the membrane into the core, and then flows via the vacuum line to a suitable trap. Retained molecules (the retentate) remain in the original sample container. Both the retentate and the filtrate fractions can be recovered. Filtration can be automatically terminated at any preselected point.

Circle No. 46 on Reader Enquiry Form

**Amino acid analyser.** Mark Instrument Company. The newly-developed system provides single column analysis for protein hydrolyzates and physiological fluids. The Model AAA-F-100 Amino Acid Analyser eliminates lengthy and laborious manual analyses and affords the following benefits: complete and permanent strip chart presentation of the amino-acid constituents of the sample, the quantity and sequence of their elution from analyser's ion exchange column; only a minute sample is required; more accurate data and reproducible results; flexibility through easy modification, addition of accessories, or variations in operational conditions; table top size.

Circle No. 47 on Reader Enquiry Form

**Multi-point recording facility.** Chandos. A new electronic attachment provides multi-point recording facilities from a single channel recorder. Two or more of these units could be used with existing dual channel or multi-channel recorders if they are continuous trace. The system provides a channel identification datum and a means of adjusting the time spent recording individual points. Models accommodating up to 36 points are available for various types of measurement—pressure, temperature, pH, conductivity, oxygen, selective ions etc. Adjustment and zero suppression can be built in to provide a given full scale deflection.

Circle No. 48 on Reader Enquiry Form

**Miniature accelerometer.** SE Labs. The EGAI. 125-5, measures acceleration, vibration and shock from 0.001g to 5g. Weighing less than 0.5 g and occupying less than 0.006 cubic inches, the EGAI is ideal for situations requiring minimal weight addition to the item under test. Applications vary from tremor studies on human and animal subjects to vibration and flutter analysis on vehicle models undergoing wind tunnel tests. The EGAI is a semiconductor strain gauge device which measures static and dynamic acceleration with a sensitivity of 15mV/g unamplified. Available with six different mounting facilities, it has an operational temperature range of  $-40$  to  $121^\circ C$ . In addition, it is available with a 0.7 critical damping option.

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