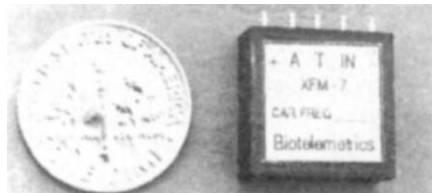


The scientific instruments scene

Laboratories large and small can benefit from the products in this week's selection, with instruments for mass-producing microplates and washing loads of glassware, to a miniature laser.

MICROMINIATURE surgically implantable FM telemetry transmitters from Biotelemetry, Inc. can be used for the transmission of biologic data from unrestrained animals (*Reader Service No. 101*). The



The dime-sized Biotelemetry transmitter.

transmitters come in three types: the \$395 (US) CFM-6 transmits flow pH, temperature, pressure, or other digital high-level signals; the similarly priced CFM-8 transmits ECG, EEG, EMG or other low-level signals; and the \$255 (US) XFM-7 transmits both analog and digital data. All transmitters are encapsulated with black epoxy resin, but must be coated with beeswax or impermeable silicone prior to implantation. The battery-powered transmitters weigh no more than 1 g, and have a transmission range of up to 7 metres.

For laboratories that process large volumes of microplates for enzyme immunoassays, Skatron has an automated **microplate coater** that it says can aspirate, wash and fill 1,600 to 2,400 microplates in an 8-hour workday (*Reader Service No. 102*). The model AMS-120 machine consists of a conveyor belt, a washer, a dispenser, a microprocessor-controller and two detachable autoclavable magazines. Each magazine holds up to 120 of most common makes of microplates. During processing, plates move from one magazine, past the washer and dispenser units, and are loaded into the second magazine for storage or incubation. The microprocessor can be programmed for any required protocol, and the washer and dispenser can be configured on the transport belt to suit a variety of applications. Skatron says the \$40,000 (US) AMS-120 can dispense 100-300 μ l volumes with a precision of ± 2.5 per cent C.V.

The Aristoplan microscope from Leitz is a modular universal **research microscope** that can be used for bright field, interference contrast and phase contrast techniques (*Reader Service No. 103*). The £9,000 (UK) Aristoplan has an integrated incident light fluorescent system, that allows different wavelengths to be interchanged by inserting filter modules into the changer. The mechanical stage can be rotated 90°, and the field of view

index is 28. Almost all standard objectives can be used for interference contrast work, and Wollaston prisms in modular form fit into the standard nosepiece. The Orthomat E camera system completes the Aristoplan, with its binocular head with two exit ports for camera or video systems.

Lambda Photometrics has a **miniature laser** so small that it can be held in the palm of one hand (*Reader Service No. 104*). The Gala solid-state collimated laser system uses GaAlAs laser diodes to provide power levels from 4 to 25 mW at wavelengths from 750 to 830 nm. The laser measures 50×50×107 mm, and runs on either a.c. or d.c. power. The unit requires a key to turn it on, and conforms to FDA



Lambda Photometrics' Gala laser system fits in the palm of the hand.

and BRH safety regulations. The laser has a 25 mm optic axis height and is compatible with standard optical hardware. Lambda Photometrics says the Gala laser's £512-1,132 (UK) price makes it a lower cost alternative to He:Ne lasers for industrial or laboratory applications.

A toploading microprocessor-controlled **analytical balance** is available from Fisher Scientific (*Reader Service No. 105*). The flip-up keyboard of the model XTA-100 balance can be left in place for routine simple weighings, or can be used in parts counting procedures, percentage weight-loss calculations and statistical analysis. The balance reads directly in 0.1 to 100,000 mg, 0.00001 to 3.5 Avoirdupois ounces, 0.001 to 1,543 grains and 0.0001 to 100 g. The built-in memory holds 255 weight values, permitting the operator to total them minus tare weight. The XTA-100 comes with a 108 mm pan and a draft shield, for \$1,695 (US).

Haake Buchler has a low shear-rate **viscometer**, the RV20 (*Reader Service No. 106*). The RV20 can be used manually to display 30 values of shear rate, shear



Haake Buchler's fully configured viscometer.

stress, and temperature for viscosity calculations, or can be coupled to a speed programmer and recorder for automatic plots of flow curves, yield points and thixotropy. It can also be interfaced with an IBM computer to provide visco-elastic measurements, calculations, regression models and plots. The basic \$20,000 (US) RV20 costs \$31,000 (US) with the programmer and recorder, and \$37,000 (US) with an IBM computer.

Jeol has developed a **TLC/FAB-MS system** that it says can carry out continuous, direct measurements of components separated by thin-layer chromatography with the quantitation benefits of mass spectrometry (*Reader Service No. 107*). The £20,000 (UK) system functions by introducing the TLC plate directly into the ion source of the mass spectrometer, analysing all components developed on the TLC plate by the fast-atom bombardment ionization method. The system uses either glass or aluminium TLC plates. Jeol says the system meets the high resolutions of HPTLC, and can be used in the analysis of non-volatile and thermally labile compounds.

For laboratories with lots of glassware washing to do, Lancer UK Ltd has large capacity **washing machines** that it says are capable of cleaning up after 30-50 scientists (*Reader Service No. 108*). The machines are constructed of stainless steel, and have multiple washing levels. Each microprocessor-controlled machine has a high-pressure pump coupled to a heating system with temperatures of up to 95°C. Lancer sells three large models: the £10,133 (UK) 1600E holds 320 250 ml bottles, the £6,694 (UK) 1400E holds 240, and the £5,391 (UK) 1300E holds 180. □

These notes are compiled by Carol Ezzell from information provided by the manufacturers. To obtain further information, use the reader service card bound inside the journal. Prices quoted are sometimes nominal, and apply only within the country indicated.