Equipment

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science does not assume responsibility for the accuracy of the information. A coupon for use in making inquiries concerning the items listed appears on page 894.

■ REFRIGERATION CHAMBER provides a temperature adjustable from –10° to –70°F for low-temperature metal curing. Volume is 5 ft³. The chamber is separate from the refrigeration equipment and is connected to the latter by a 6- by 6-in. duct. Net thermal capacity is 500 btu/hr at –70°F. (Cincinnati Sub-Zero Products, Dept. S973)

■ COUNTER-TIMER is a completely transistorized instrument with in-line readout. Frequency is measured from 0 to 150 kcy/sec. Predetermined counting may be performed to 9999 with extension in steps of 10, or 100 with external count gating. The instrument may also be used as a preset interval generator, producing delay or interval pulses from 10 μsec to 10 sec in 10-μsec steps. (Potter Instrument Co., Inc., Dept. S988)

■ OUTPUT PRINTER for use with computers and data-handling equipment is capable of printing 10 lines of 120 alphanumerical characters per second. Up to 63 different characters are available. (Potter Instrument Co., Inc., Dept. S989)

■ STOPCOCK provides continuously variable flow adjustment over a broad range of liquid or gas flow. The stopcock consists of a precision-bore cylindrical barrel and a matching plug. A groove is used on the plug instead of the usual bore. Rotation of the plug moves it axially in the barrel, matching the groove to the inlet and outlet. (Wilmad Glass Co., Dept. S990)

■ DUAL SPECTROMETER permits measurement of the ratio of two isotopes in a radioactive sample. The instrument uses two scalers, two single-channel analyzers, a power supply, a linear amplifier, and a preamplifier. The two scalers, each of which counts one of the isotopes, are both controlled by a single timer. Count preset on one of the scalers allows direct indication of ratio. (Technical Measurements Corp., Dept. S994)

■ MICROFILM SEARCHING MACHINE searches up to 72,000 16-mm film frames to select the particular frames sought on the basis of coded information recorded on the film alongside each frame and displays the frame on a viewer screen. A binary code of 32 bits is used. Indexing information is established by means of a self-contained keyboard. Depression of

a search bar initiates the scanning operation. Scanning speed is 60 in./sec and acceleration and deceleration each consume 1.5 sec. The frame, when found, is positioned with accuracy of ±0.02 in. The optical projection system produces a 50-fold enlarged image on a backlighted screen which may be viewed in a normally lighted room. (Benson-Lehner Corp., Dept. 4)

■ COUNTER-TIMER measures frequency to 1 Mcy/sec, time and period in 1-μsec increments, phase angle in 0.1-deg increments, and counts events to seven digits. Data are displayed by a linear array of numeral-electrode neon tubes. Beam switching tubes are used for counting. (Systron Corporation, Dept. S992)

■ SPECTROMETER RADIOGRAPH is a mobile unit designed to measure radiation in medical applications such as studies of thyroid uptake and location of metastases. The instrument consists of a single-channel spectrometer, a scintillation probe with a 2-by-2-in. NaI crystal, and a counter-balanced holder for the detector. The channel for selection of pulses is defined by front-panel controls. (NRD Instrument Co., Dept. S999)

■ SILVER CHROMATE AGAR PLATE tests for cystic fibrosis by detecting abnormally high electrolyte concentration in skin excretion. A yellow-white discoloration of the plate is produced in a finger or hand imprint on the plate when high chloride is present. (Hyland Laboratories, Dept. 13)

■ ISOLATION OF SURFACE FILMS from metals is aided by two ready-prepared reagent solutions. Iodine-methanol solution serves for isolation of films from aluminum alloys containing no copper. Iodine-methanol sulfosalicylic acid solution serves similarly for aluminum-copper alloys. (Fisher Scientific Co., Dept. 2)

■ STANDARD-CELL OVEN provides temperature regulation of ±0.01°C, short-term, permitting 2-μv stability in standard-cell voltage. Long-term regulation is ±0.05°C. Enclosure temperature can be measured to ±0.005°C by means of a built-in resistance bridge. Three cells are accommodated in the enclosure space which measures 6½ by 3 by 3 in. Heater supply is 24 to 28 v d-c. (Julie Research Laboratories, Inc., Dept. S991)

■ RADIOGRAPHY UNIT can be operated at full load continuously for 50 min. The equipment is portable, the power supply weighing 45 lb and the x-ray generator and tube weighing 55 lb. The focal spot is 1 mm in diameter, and the radiation angle is 42 deg. Excitation voltage is continuously variable between 30 and 100 kv. The tube housing is shock proof and radiation-proof. (Philips Electronics, Inc., Dept. 10)

JOSHUA STERN
National Bureau of Standards

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Bacteriologist, Ph.D. Desires teaching position in biological sciences at college. Box 108, SCIENCE 4/25; 5/2

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(a) **Clinical Research Physician;** responsibilities include evaluation of company data from medical standpoint on new drugs, initiation of preliminary as well as extensive clinical studies of new drugs; writing for technical journals; some travel, 10 to 25 percent; East. (b) **Head, Department of Endocrinology** and, also, **Section Head;** one of leading companies; Ph.D., M.D., or equivalency with training in endocrinology research; salaries, respectively, $10,000 or above and $7200–$9000; Middle West. (c) **Chief Technologist,** ACP with B.A. or M.A. in chemistry; 400-bed hospital; vicinity New York City. (d) **Chairman, Department of Biology** and **Assistant Professor,** physical chemistry; Ph.D.'s with experience in teaching and research; university, foreign country; all teaching in English. S4-3 Medical Bureau, Burneice Larson, Director, 900 North Michigan Avenue, Chicago. X

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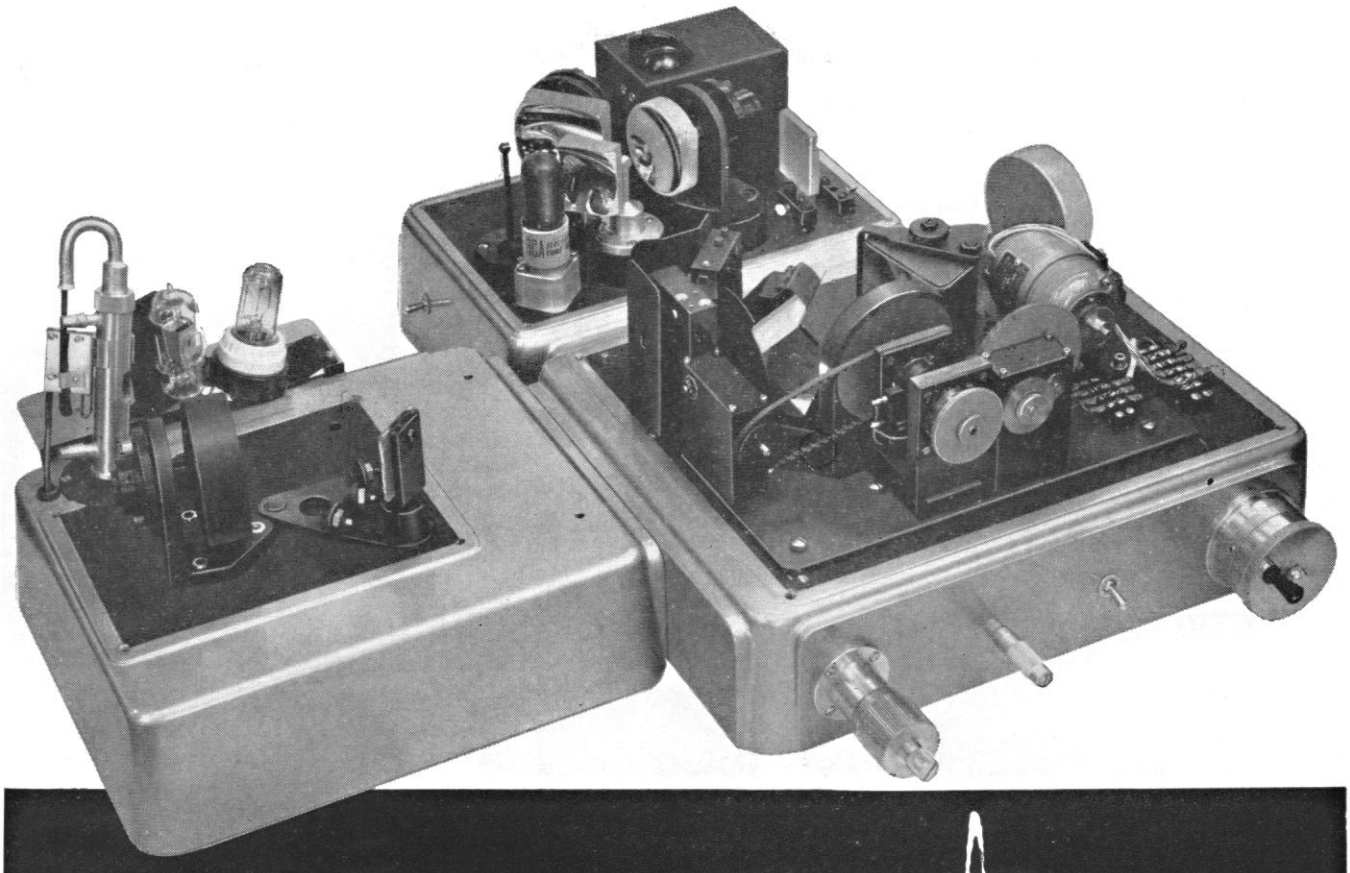
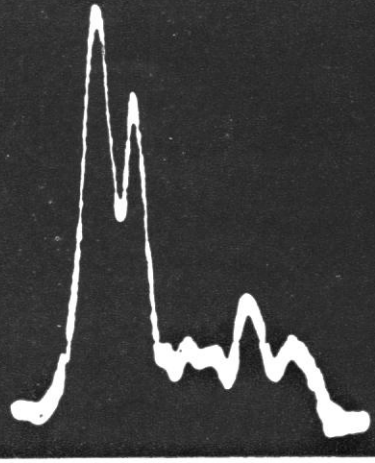


Shown at right are traces (2-3) of a polystyrene sample made at a speed of 15 spectra per second over a scan interval of 6.8-13 microns. Specifications for a rapid scan instrument vary according to the use to which the instrument is to be put. A typical instrument has a wave length range of 0.20 to 13.5 microns with fused silica or NaCl prism; effective aperture of f/5.0; scanning frequency adjustable from 2.5 to 90 cycles per second; and scan interval continuously adjustable from essentially zero to the complete wave length range.



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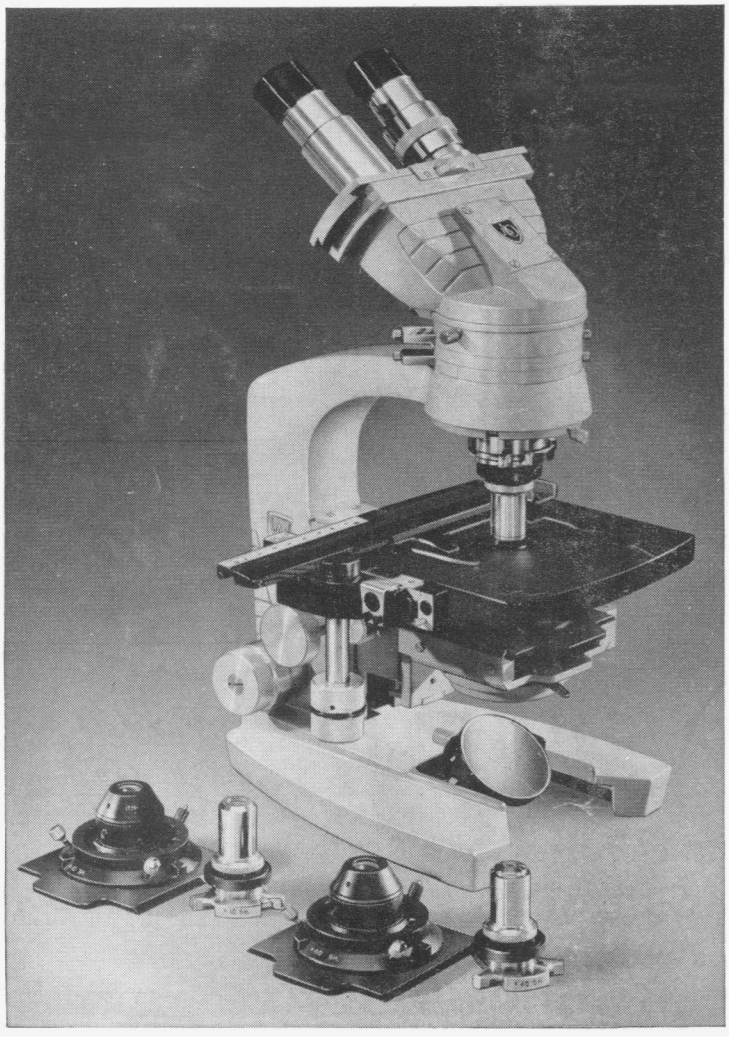

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