

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 322.

■ **VISCOMETER** for measuring the consistency of starch pastes consists of a stainless steel beaker immersed in a temperature-controlled bath and a propeller stirrer. Changes in the torque required to drive the propeller in the paste are transmitted to a dynamometer and are registered by a strip-chart recorder. The repeatability is ± 1 percent. (Gaertner Scientific Corp., Dept. 224)

■ **ULTRAVIOLET SPECTROMETER** permits analysis of steel for carbon, phosphorus, sulphur, and all metallic elements. The instrument is direct-reading for as many as 23 elements simultaneously. To provide access to the far ultraviolet region, the spectrometer is evacuated throughout the internal light path and the sample chamber is flushed with inert gas to avoid light absorption by oxygen at wavelengths shorter than 1900 Å. Total wavelength range is from 1600 to 3300 Å. The results of analysis are displayed on a chart recorder. (Applied Research Laboratories Inc., Dept. 222)

■ **DRY BOX** provides a dust-free, draft-free, isolated work space. Four entry ports permit cooperation of two workers. The sleeves and access door are gas tight. Vinyl sleeves are available in a variety of lengths. The box is made of $\frac{1}{4}$ in. acrylic plastic. (Air Shields Inc., Dept. 223)

■ **RHEUMATOID-ARTHRITIS TEST** is available as a kit containing latex-globulin reagent, positive and negative control serums, glycine-saline buffer diluent, and a divided glass slide. Each kit contains material for at least 100 tests. The materials are also available separately. (Hyland Laboratories, Dept. 232)

■ **OPTICAL MEASURING INSTRUMENT** is designed for precise coordinate measurements on plates or film. The instrument reads to 0.002 mm with a standard magnification of 15 and a measuring range of 50 by 100 mm. Magnification can be changed by interchange of objectives. With accessory plate holders, larger plates can be accommodated. Stage rotation of 5 deg permits plate alignment. In operation, an image of the plate is displayed on a projection screen for setting. Viewing is possible under ordinary room lighting. Instruments are available for polar or rectangular coordinate measurements and in either inch or metric system calibration. (Gaertner Scientific Corp., Dept. 217)

■ **ELECTRICAL MEASURING INSTRUMENT** is automatically programmed to select any two of 250 circuit points for measurement of resistance, polarized d-c or a-c voltage, or insulation resistance. Range of voltage measurement can be 0.5 to 500. Resistance range is 1 ohm to 9.99 megohm with selectable tolerance. Insulation resistance is measured at 500 v d-c with a theoretical upper limit of 10,000 megohm. Operation rate is 60 to 100 tests per minute. (Lavoie Laboratories, Inc., Dept. 229)

■ **POWER SUPPLY** is designed to replace storage batteries in the laboratory. The transistorized device takes an input of 100 to 130 v a-c and delivers 10 to 14.5 v d-c at currents up to 15 amp. Regulation is ± 0.2 percent over the input and output ranges stated. Ripple is 2 mv r.m.s. at full load. Recovery time is less than 1 msec. Internal impedance is less than 3 mohm. (Southwestern Industrial Electronics Co., Dept. 231)

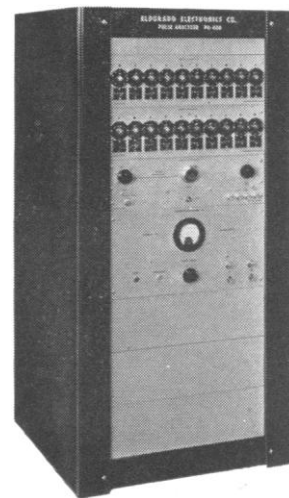
■ **GLOW-LAMP SWITCH** has three electrodes, one of which is used to trigger the tube discharge. With a voltage of 140 to 180 maintained across a pair of electrodes, application of 140 v d-c to a center electrode will start the lamp. With no voltage on the trigger electrode, more than 200 v is necessary to initiate conduction. The current required for triggering is 80 μ a or less. (General Electric Co., Dept. 227)

■ **TIME INDICATING TUBE** is available in full-scale ranges of 250 to 5000 hr. Elapsed time measured by the tube is read with a commercially available colorimeter. The tube operates over an ambient temperature range of 0° to 100°C. Current drain is 1 to 100 μ a d-c, and voltage drop is approximately 2. The tube can be mounted in any position. (Raytheon, Dept. 228)

■ **URANIUM FLUORIMETER** is a transmission-type instrument. Its range is 10^{-9} to 10^{-5} g of uranium. With special care, levels below 10^{-9} g may be measured. Readings are obtained from a digital dial. An attachment for liquid samples may be used with the instrument for the determination of beryllium, aluminum, and other substances. (Ball Brothers Research Corp., Dept. 234)

■ **SPECTRUM ANALYZERS** are offered in two models, one employing magnetostriction filters, the other crystal filters. In the first, the signal to be analyzed is applied to 100 filters simultaneously. Output of the filters is scanned by a high-speed capacitance commutator. Bandwidth is 32 cy/sec. The range from 50 to 10,500 cy/sec is covered in three parts. The second analyzer is a heterodyne type which separates 4-kcy/sec

Low cost multi-channel PULSE-HEIGHT ANALYZER



20 channels
100 spectrum points
\$4840

FEATURING:

- * Building Block Design—can be expanded as desired
- * 10 to 50 channel capacity
- * 5 digit direct readout
- * Excellent stability & resolution
- * Window amplifier system yields 50 to 250 spectrum points
- * Simplified operation—easy to maintain

The Eldorado Model PA400 brings multi-channel analysis within the budget range of even the smallest laboratory. Expandable from 10 to 50 channels, the building block design enables the user to purchase a basic instrument and add additional 10-channel increments as needed. The window amplifier circuit provides for a continuously variable selection of any 20v segment of spectrum under study. With this design up to 5 times the number of data points as there are available channels can be obtained.

By adding an Eldorado Model TH300 Time-to-Pulse Height Converter, the above system becomes a Time-of-Flight Spectrometer and a Milli-microsecond Time Interval measuring device.

SPECIFICATIONS

INPUT PULSE RANGE: 5 — 105v
COUNT STORAGE: 10⁵ counts per channel
CHANNEL STABILITY: ± 15 mv referred to the window amplifier input
PRICE (f.o.b. factory):
10 channels — \$3340.
30 channels — \$6340.
50 channels — \$9340.
Write for complete technical information.
Address department S7.

4

Eldorado Electronics

2821 Tenth Street
Berkeley 10, California

bandwidths up to 20 kcy/sec into 29 equal frequency bands. Bandwidth of the crystal filters used is 135 cy/sec. Filter outputs are scanned electronically. (Kay Electric Co., Dept. 246)

■ **SOLAR FURNACE** includes a fully automatic solar tracking system to maintain precise alignment of the parabolic collector with the sun. Temperature is adjustable up to 7000°F. Motor-driven remote controls are provided for sample positioning. Mobile mounting of the furnace permits its use in any convenient location. (Thermal Dynamic Products Inc., Dept. 247)

■ **LIQUID-LEVEL INDICATOR** is an optical device using a photoelectric level-sensing probe. Operation depends on the total internal reflection rather than on the transmission of light through the fluid medium. The repeatability is within 0.015 in. with response time in milliseconds. The probe may be operated over the temperature range of -65° to +250°F. Output current up to 10 amp is furnished. When it is installed in a pipe line, the unit can distinguish between liquid and gas flow. (Revere Corporation of America, Dept. 245)

■ **PULSE-HEIGHT SELECTOR** features three modes of operation: an integral mode for counting all pulses above a base line; a 0-to-10-v window mode; and an upper-limit mode which makes the window control a 0-to-100-v upper limit for counting pulses between lower and upper limits. Rise time of the linear amplifier is 0.15 µsec and maximum gain is 8000. (Technical Measurement Corp., Dept. 239)

■ **ELECTROMETER** is a dynamic condenser instrument designed particularly for measuring the radioactivity of soft beta emitters such as tritium, carbon-14, and sulfur-35. Samples may be gas, liquid, or solid. The range from 1 mc to 5 µmc can be measured without use of absorbers or dilution. The instrument may be used to measure continuously flowing gas. (Nuclear-Chicago Corp., Dept. 238)

■ **GREASE-WORKER** is a motor-driven device for preparation of samples of grease for measurement of consistency by the penetration test. The motor is automatically stopped upon completion of a pre-set number of strokes, from 1 to 100,000, on two grease-working cups. (Fisher Scientific Co., Dept. 248)

■ **MEMORY STORAGE UNIT** operates by charging selectively any one of 60 capacitors mounted on a rotating disk. The charging and pick-off may be continuous, or the disk-drive shaft may be indexed by a servomechanism. Maximum charging voltage is ±200 v d-c. (Industrial Control Co., Dept. 241)

■ **VACUUM CONTROL** is actuated by a thermocouple vacuum gage at any set point within the range of 5 to 500 µ-Hg. A contact-type meter is used which operates a relay to control pumping equipment. A constant-voltage transformer furnishes heater current to the gage. (Veeco Vacuum Corp., Dept. 244)

■ **SPECTRUM ANALYZER** is offered in frequency ranges from 2400 to 9600 Mc/sec. Accuracy is ±0.8 percent or ±1 Mc/sec. Display of the spectrum is presented on a 5-in. oscilloscope. Sweep-rate ranges from 3 to 30 cy/sec. Minimum frequency dispersion is 50 kcy/sec in. The spectrum amplitude display is linear. (Polytechnic Research and Development Co., Dept. 235)

JOSHUA STERN
National Bureau of Standards

PERSONNEL PLACEMENT

CLASSIFIED: 25¢ per word, minimum charge \$4.25. Use of Box Number counts as 10 additional words. Payment in advance is required.

COPY for classified ads must reach SCIENCE 2 weeks before date of issue (Friday of every week).

DISPLAY: Rates listed below—no charge for Box number. Monthly invoices will be sent on a charge account basis—provided that satisfactory credit is established.

Single insertion	\$26.00 per inch
13 times in 1 year	24.00 per inch
26 times in 1 year	23.00 per inch
52 times in 1 year	22.00 per inch

For PROOFS on display ads, copy must reach SCIENCE 4 weeks before date of issue (Friday of every week).

Replies to blind ads should be addressed as follows:

Box (give number)
Science
1515 Massachusetts Ave., NW
Washington 5, D.C.

POSITIONS WANTED

Dental Scientist, age 34, wants position of responsibility in dental engineering research. Academic background in dentistry and engineering; 7 years' engineering research and design experience. Box 183, SCIENCE. 8/8

Microbiologist, M.A.; 5 years of research experience in immunology, chemotherapy. Available for suitable position in September. Box 177, SCIENCE. 8/8

Organic Chemist. Ph.D.; 6 years' research in industry; desires more basic research than is possible in small company. Medical Bureau, Burnice Larson, Director, 900 North Michigan Avenue, Chicago. X

POSITIONS WANTED

Ph.D., Microbiology-Biochemistry; 5 years of industrial and academic experience, fermentation processes, chromatography, bioassay, manometric, and radioisotope techniques. Seeks industrial position. Box 179, SCIENCE. 8/8, 22

POSITIONS OPEN

(a) Biochemist; Ph.D. experienced hospital biochemistry; work with pathologist, serve as liaison between pathologist, medical staff; 300-bed, fully approved hospital; Midwest city of 100,000. (b) Virologist; Ph.D., D.V.M. for university appointment; consider graduate microbiologist; long-term research project on human, animal virus relationships; to \$8000; East. (c) Chemist; M.S., or young Ph.D.; help plan new department to occupy all new laboratory facilities in expanding hospital, over 200 beds; 120,000 procedures yearly; stable Midwestern city of 40,000. (d) Bacteriologist; 350-bed general hospital; to \$6000 or better; Mideast. (e) Research Biochemist; active laboratory, 250-bed eastern hospital; city of 50,000. Woodward Medical Bureau, Ann Woodward, Director, 185 North Wabash, Chicago. X

Experienced Histology Technician, ASCP registered preferred. Supervise histology laboratory in large midwestern teaching hospital, train technicians, opportunity for research. Box 163, SCIENCE. tf

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Box 188, SCIENCE

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POSITIONS OPEN

Associate Director. Leading manufacturer of biologicals, blood bank, and blood typing serums seeks M.D.; laboratory background essential; permanent position; excellent remuneration; no travel. Write to Knickerbocker Biologicals Inc., 300 West 43rd Street, New York 36, New York. X

Chemist, male, with B.S. degree in organic chemistry or biochemistry, to participate in analytical biochemical research in mental illness in hospital near Philadelphia. Write stating age, education, experience, and salary desired to P.O. Box 8507, Philadelphia 1, Pa. 7/25; 8/1, 8, 15

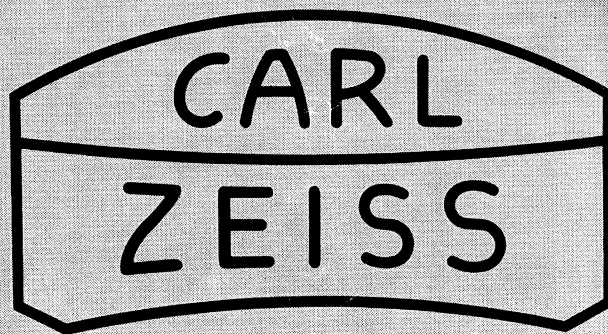
Immunologist-Virologist. New vaccine program of progressive eastern pharmaceutical manufacturer offers unusual opportunity for experienced M.S. to participate in team activities as scientific specialist with broad liaison and advisory responsibilities. Salary commensurate with experience plus outstanding employee benefit program. Send complete résumé. Box 190, SCIENCE. 8/15

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HAND REFRACTOMETER

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on equipment of interest to you.*

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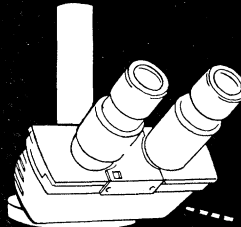
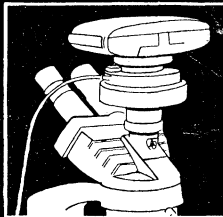
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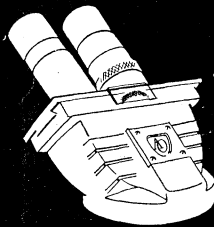


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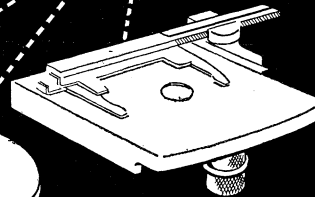
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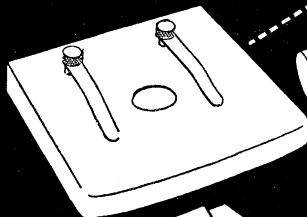
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