

New Products

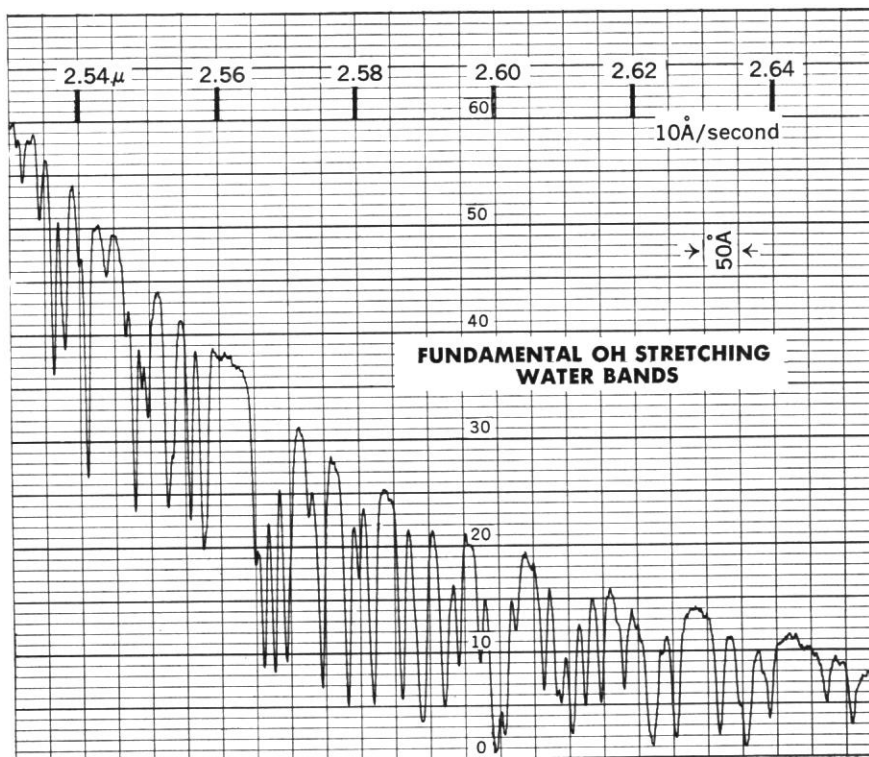
The information reported here is obtained from manufacturers and from other sources considered to be reliable, and it reflects the claims of the manufacturer or other source. Neither Science nor the writer assumes responsibility for the accuracy of the information. A coupon for use in making inquiries concerning the items listed appears on page 238.

■ **FLASH X-RAY EQUIPMENT** furnishes an x-ray pulse of about $1/6 \mu\text{sec}$ duration. Intensities are said to be adequate for fragmentation or explosion studies at distances up to 6 ft after penetration of x-rays through 1-in. plywood. The flash tube is tripod-mounted with height adjustable between 32 and 60 in. above floor level. The system may be fired by an externally generated input pulse, by closing a remotely located contact, or by depressing a panel push button. (Zenith Radio Corp., Dept. 931)

■ **VARIABLE-RATE TURNTABLE** is designed for testing inertial devices weighing up to 50 lb. Two models are available. A high-speed model has a dynamic range of $\pm 1200 \text{ deg/sec}$. Range of the slow-speed model is $\pm 1 \text{ deg/hr}$. The turntables can pass smoothly and repeatably through zero speed. Speed regulation is ± 0.02 percent of range and previously programmed speed is repeated after stopping with accuracy within ± 0.5 percent of maximum. A strip-chart recorder continuously indicates and records table speed. (J. W. Fecker, Inc., Dept. 932)

■ **ELECTRON MICROSCOPE** provides up to $\times 200,000$ direct magnification for visual observation or for photographic recording on a $3\frac{1}{4}$ -by-4-in. plate. Magnification is indicated with accuracy of ± 5 percent. Resolving power is said to be 10 Å or better. The electron-optical system includes six electromagnetic lenses. Minimum beam diameter is 1 to 2μ at the specimen. Accelerating voltages of 40, 60, 80, and 100 kv, selectable during operation, are provided. Beam current is adjustable between 10 and $150 \mu\text{a}$. Current stability of $\pm 5 \times 10^{-6}$ and voltage stability of $\pm 10^{-5}$ are claimed. Evacuation time after specimen change is 20 sec. (Philips Electronics, Inc., Dept. 934)

■ **AUTOMATIC RECORDING TITRATOR** is designed to make variable pH and constant pH titrations automatically. The recorder plots either variation of pH as a function of volume of titrating solution added, or the volume of titrating solution required to maintain constant pH as a function of time. For variable pH or EMF titration, a motor-driven burette delivers titrant to the cell as the sample is agitated by a magnetic stirrer. For derivative pH or EMF titration, the pH meter is coupled to the recorder through an electronic differentiator. Pro-



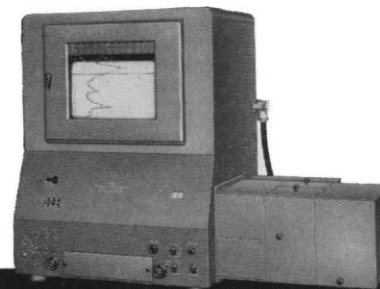
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vision is made for plotting the second derivative function. For constant pH or EMF titration, a servomechanism is employed in which a motor-driven burette delivers titrant in response to an error signal received from a pH comparator. Titrant is fed until the preset value is reached. Precision of ± 0.02 pH units or ± 1.2 mv is claimed. Burette capacity is 1 ml for the standard unit, and cell volume is 15 ml. The temperature of the titration cell is maintained within $\pm 0.1^\circ\text{C}$ of the desired temperature. (Polarad Electronics Corp., Dept. 940)

■ **VARIABLE TEMPERATURE BATH** is controlled by ten separate thermistor controls over the range -55° to $+100^\circ\text{C}$. Accuracy is $\pm 0.1^\circ\text{C}$. Interiors are made of stainless steel. Units are equipped with 1 hp motors for agitation. Over-all dimensions are 46 by 36 by 38 in. (Lab-line Inc., Dept. 933)

■ **MULTICHANNEL ANALYZER** features plug-in units for pulse-height analysis, neutron time-of-flight measurement, pulsed-neutron decay measurements, or special-purpose program. The instrument provides 256 channels with 65,535-count capacity per channel. The main unit contains a magnetic-core memory, memory current drive circuits, memory cycle control binaries, address

and arithmetic binaries, binary-to-analog converters, 3-in. cathode-ray-tube display, and power supplies. A variety of data read-out systems is available. (Technical Measurement Corp., Dept. 941)

■ **NULL DETECTOR** is a d-c instrument with 8 ranges of sensitivity from 10 μv to 100 v full scale. The instrument may be used as a d-c amplifier with gain of 100 db and input resistance 10 megohm. Two modes of operation, selectable by panel or foot switch, are provided. In the "hunt" mode 60 db of meter scale is available without switching. In the calibrate mode, the meter scale is linear from -1.2 to 0 to $+1.2$. (Boonton Electronics Corp., Dept. 937)

■ **CALIBRATION STANDARD** uses digital presentation of voltage and current. Voltages range from 1 mv to 2000 v in 12 ranges for d-c and in 14 ranges for a-c. Current range is 10 μa to 30 amp full scale, a-c and d-c. Accuracies of ± 0.1 percent for d-c and ± 0.3 percent for a-c are claimed. Protective interlocks prevent damage to instruments being calibrated. Accuracy can be increased by using a synchronous motor and generator set between the power line and the calibrator. (Radio Frequency Labs. Inc., Dept. 944)

■ **ACCELEROMETERS** of crystal type are designed to operate in ambient temperatures -65 and $+540^\circ\text{F}$ without cooling or correction. Sixteen models are available with sensitivities ranging from 30 mv/g to 1 mv/g and natural frequencies ranging from 65 to 150 kcy/sec. Output is said to be accurate to ± 5 percent and linear to 8 kcy/sec and down to 2 cy/sec when the unit is used with the manufacturer's cathode follower and probe. (Columbia Research Lab., Dept. 938)

■ **AIR MONITOR** for particulate radioactivity detects alpha, beta, and gamma activity, records the amount on a continuous chart, and warns by light and bell when preset limits are exceeded. The unit will operate unattended for about 5 days. Maximum counting rate is 50,000 count/min. (Nuclear Measurements Corp., Dept. 936)

■ **POWER SUPPLY** furnishes 3 to 1000 v d-c at 500 ma. Full current is available at all voltage settings. Load and line regulation is 450 mv or 0.045 percent, whichever is greater. Maximum ripple is 8 mv r.m.s. (Dressen-Barnes Corp., Dept. 939)

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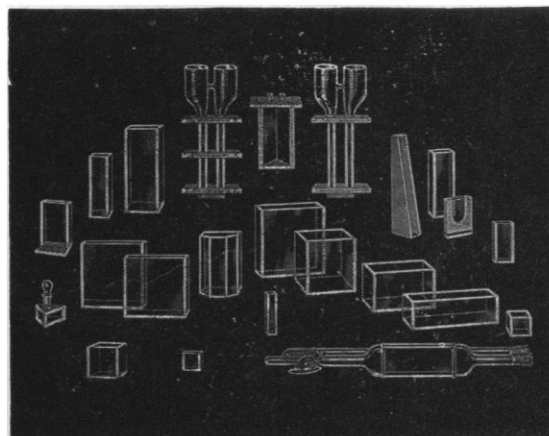
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