

### Tubular Furnace

The model 1700 HTF has a 3-inch-diameter tubular capacity and reaches 1650°C. Heating elements made of Kanthal Super 33 are replaceable in minutes and offer rapid heat gain and long service. The unit is compact because it utilizes Zircar insulation. Applications include sintering, ceramic firing, brazing, annealing, crystal growth, and research. CM Manufacturing Company. Circle No. 908 on Readers' Service Card.

### Three-Piece Separatory Funnels

Replaceable glass tips (Fig. 1) add to the value of a line of separatory funnels in terms of longevity and versatility. Tips come in several forms: long and straight, short and drip type in two sizes. These funnels will also accept glass burette tips. All funnels are available in 125-, 250-, or 500-milliliter sizes. Pear-shaped and globe-shaped funnels are also available in the 60-milliliter size. Tips may be purchased separately. Corning Glass Works, Scientific Glassware Department. Circle No. 906 on Readers' Service Card.

### Vortex-Evaporator

The vortex-evaporator accepts conical bottom centrifuge tubes, scintillation vials, and macro or micro test tubes. Standard sample blocks are available for processing by heating or cooling vortex mixing and vacuum evaporation. The unit controls

temperature from  $-10^{\circ}$  to  $100^{\circ}\text{C}$  and vortex speed by dial, and a gauge registers vacuum. The clear plastic lid allows the operator to observe the tubes in the sample block during processing. Buchler Instruments. Circle No. 917 on Readers' Service Card.

### Temperature-Controlled Animal Board

The TCA board is designed to maintain constant body temperature of small animals during prolonged anesthesia. The device maintains a closed circuit between a probe placed in the animal and the board. Temperature maintenance is within  $0.2^{\circ}$  of  $37^{\circ}\text{C}$ . The board is completely immersible for cleaning and the temperature control unit is compact and remote for best use of bench space. Harvard Apparatus Company, Incorporated. Circle No. 919 on Readers' Service Card.

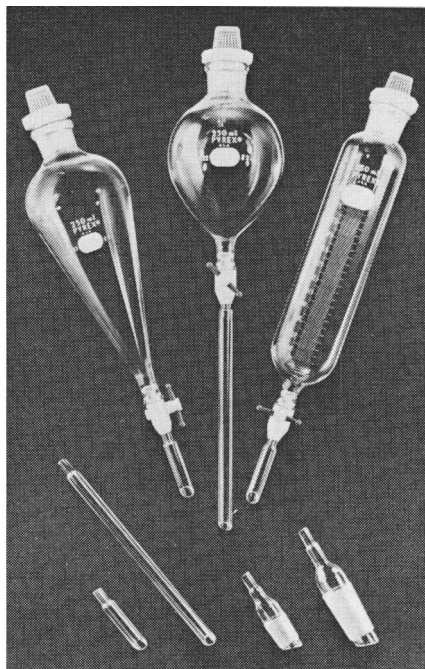


Fig. 1. Corning three-piece separatory funnels extend the life of the device in the laboratory and its versatility. The tips are interchangeable and replaceable.

### Gem Refractometer

The Gemeter measures refractive index for gemstones in the range of 1.4 to 2.7. The stone is placed on an examination disk, a switch is depressed, and the refractive index is displayed on a panel. Sarasota Instruments, Incorporated. Circle No. 910 on Readers' Service Card.

### Ring Viscometer

The series M measuring elements offer standard measuring devices for up to 20,000 centipoises, pressure capability up to 1000 pounds per square inch, and temperature capacity up to  $300^{\circ}\text{F}$ . The series includes ring viscometers, recording and indicating receivers, and a variety of devices designed for various applications. Options include electric or pneumatic control, alarms for high or low viscosities, temperature compensation, and electric output for data processing or computer control. Norcross Corporation. Circle No. 905 on Readers' Service Card.

### Modular Heating Bath

The Dri-Bath is a heating unit that accommodates various sized heating blocks for temperatures from ambient to  $110^{\circ}\text{C}$ . The heating blocks accommodate different numbers of various size tubes for incubation or chemical tests. Seven block sizes from those with 30 6.5-millimeter wells to those with 6 25.75-millimeter wells. A solid-state device controls temperature to within  $\pm 0.1^{\circ}\text{C}$ . There are indicator lights for heating cycle and power and a dial to indicate temperature setting as well. Thermolyne subsidiary of Sybron Corporation. Circle No. 907 on Readers' Service Card.

### High-Speed Gel Permeation Chromatography Columns

Small particle diameter  $\mu\text{Styragel}$  liquid chromatograph will achieve analyses in 5 to 15 minutes. If resolution, rather than speed, is required, these columns will provide over 30,000 plates per meter as opposed to 2,200 plates per meter with standard systems. Resolution time is increased from approximately 100 to 200 plates per minute to 1000 to 2000 plates per minute.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (see pages 650A and 714C) and placing it in the mailbox. Postage is free.—RICHARD G. SOMMER

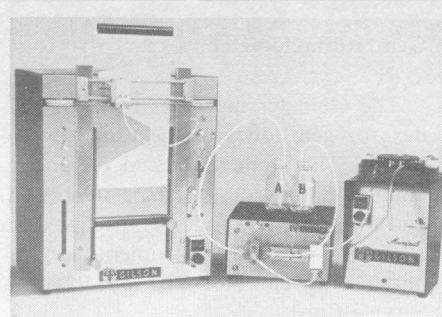
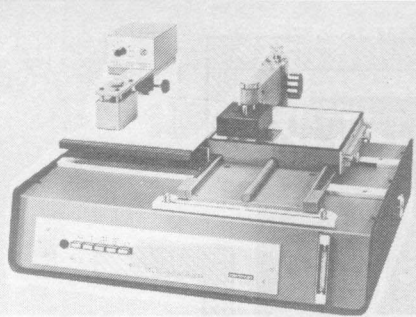


Fig. 2 (left). The MixoGrad system of Gilson Medical Electronics follows the profile of the desired gradient and combines liquids accordingly. Fig. 3 (right). Thin-layer chromatogram scanner from Shandon Southern Instruments accepts 20 by 20 centimeter plates without special preparation and automatically produces a two-dimensional plot of the distribution of radioactivity.



Columns are available in pore sizes of  $10^6$ ,  $10^5$ ,  $10^4$ ,  $10^3$ ,  $10^2$ , and 500 angstroms. Waters Associates, Incorporated. Circle No. 914 on Readers' Service Card.

### Gradient Former

The MixoGrad (Fig. 2) forms linear, concave, convex, or complex gradients of pH concentration and so forth by combining two liquids in continuously varying proportions. The gradient profile is drawn on millimeter graph paper and cut to shape. A profile-following device follows the gradient; scan speed is adjustable. MixoGrad includes column rinse and automatic shut-off upon completion. Gilson Medical Electronics, Incorporated. Circle No. 912 on Readers' Service Card.

### Serum and Electrolyte Measurement

The Bionometer reads directly in milliequivalents per liter in 4 seconds. The readings are almost unaffected by nonelectrolytes in the sample. Tests may be run on samples down to 0.1 milliliter. The immersion probe is temperature compensated and readout is linear from 1 to 1999 milliequivalents per liter. Accuracy is  $\pm 1$  percent. Applications include monitoring such conditions as dehydration and mineral depletion or excess. Lab-Line Instruments, Incorporated. Circle No. 911 on Readers' Service Card.

### Aldosterone Radioimmunoassay

A kit for aldosterone is adaptable to urine, serum, or plasma samples. Sample extraction procedure avoids emulsions and requires no evaporation of large volumes of solvents. Less than

2 hours is required for 20 samples. Recovery of the tritiated aldosterone tracer is greater than 80 percent for serum or plasma samples. The standard RIA curve yields a linear logit-log plot and is identical for various sample types. The antiserum has virtually no cross-reactivity with other plasma steroids. Assay is rapid; it requires only 45 minutes for incubation. Diagnostic Products Corporation. Circle No. 916 on Readers' Service Card.

### Volumetric Pipets

Micro/Mac pipets feature self-adjusting volumes in six fixed sizes from 0.01 milliliter to 10 milliliters. The operator squeezes a bulb and the pipet automatically fills to the precise volume it holds. They are nondripping. Precision is 0.1 percent at 1 milliliter; delivery accuracy is 1 percent in all ranges. They are Pyrex and suitable for use with all laboratory reagents. Sizes below 0.5 milliliter are self-cleaning. Labindustries. Circle No. 913 on Readers' Service Card.

### Plate Scanner

A new thin-layer chromatogram scanner (Fig. 3) is suited to radioassay. It has a dot printer that renders two-dimensional distributions of radioactivity. The detector uses a gas flow-through counter with high yield and low background. In a single spot, nearly 100 percent of upward-emitted beta particles and as few as 100 disintegrations per minute of carbon-14, 50 disintegrations per minute of phosphorus-32, and 1000 disintegrations per minute of tritium radiation are detectable. Iodine-125 may be detected in chromatograms by measuring auger electrons. Advance speed is variable

from 15 to 6000 millimeters per hour and the fast return is set at 6000 millimeters per hour. Four, six, or eight chromatograms may be scanned simultaneously. Shandon Southern Instruments, Incorporated. Circle No. 909 on Readers' Service Card.

### Portable Water Quality Analysis

The model 350A photometer and the Ecopak test kit series are the main components of the self-contained Ecopack water analysis kit. Test kits for 50 parameters of water quality and a manual of procedures as well as various glassware and tools are included. The reagent kits are either colorimetric such as tests for aluminum, chlorine, and detergents or titrimetric such as the tests for acidity, alkalinity, and carbon dioxide. Addition of a portable pH meter or conductivity meter enhances the capabilities of the system. Ecologic Instrument Corporation. Circle No. 918 on Readers' Service Card.

### Literature

*EDAX 707B/Micro-Edit* is a 12-page brochure devoted to an energy-dispersive x-ray analysis system for scanning and transmission electron microscopes and microprobes. EDAX International Incorporated. Circle No. 921 on Readers' Service Card.

*Clinical and Diagnostics Catalog 1974* describes a complete line of chemicals for clinical applications including a large number of test kits. Calbiochem. Circle No. 922 on Readers' Service Card.

*Minicon Concentrators for Rapid Enrichment of Dilute Biological Samples* is the subject of an eight-page illustrated pamphlet. Amicon Corporation. Circle No. 923 on Readers' Service Card.

*Catalog Number 5174* features humidity indicators, thermometers, psychrometers, altimeters, anemometers, and other laboratory indicators. Abbeon Cal, Incorporated. Circle No. 924 on Readers' Service Card.

*Kepeco Power Supplies* is a 130-page catalog of the latest offerings in electronic laboratory gear. There is also a handbook section devoted to ferroresonance, thermal design criteria, measurement techniques, programming, digital control, high-speed dynamics, operational theory, and multi-unit interconnections. A glossary is included. Kepeco, Incorporated. Circle No. 939 on Readers' Service Card.

# Science

## PRODUCTS and MATERIALS

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