

## EQUIPMENT NEWS

*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. All inquiries concerning items listed should be addressed to Science, Room 740, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).*

■ **TRANSISTOR CURVE TRACER** displays characteristic curves of  $p-n-p$  and  $n-p-n$  transistors on the face of a cathode-ray tube. Four to 12 curves per family are traced with input current from 1  $\mu$ a to 20 ma per step, or with input voltage from 0.01 to 0.2 v per step. Seven different characteristics can be plotted. (Tektronix, Inc., Dept. S501)

■ **INTEGRATING DENSITOMETER**, for scanning paper electrophoretograms and chromatograms, furnishes two records. One is the curve of optical density, absorbance, or transmittance. The other is the integral of the first curve. The paper strip holder and scanning head will accept a wide variety of paper dimensions. (Matthew Laboratories, Dept. S515)

■ **COORDINATE CATHETOMETERS** make both a horizontal and a vertical measurement in a vertical plane in one setting. The cathetometer consists of a microscope or telemicroscope mounted so that it can be moved on a vertical bar. This assembly in turn may be moved laterally on horizontal ways. Micrometer screws provide fine adjustments. Coordinate ranges from 2 by 2 in. to 42 by 42 in. are available. (Gaertner Scientific Corp., Dept. S516)

■ **METAL DETECTOR** has an inspection aperture measuring 64 by 1 7/8 in. through which the material to be checked passes. Magnetic or nonmagnetic metals are detected. Sensitivity is adjustable for detection of particles as small as 0.039 in. in diameter. Distortion by metal of the high-frequency electromagnetic field that is set up in the aperture creates an electric signal, which is amplified to trigger an alarm. Strip material can be inspected at speeds of from 10 to 1000 ft/min. (Radio Corporation of America, Dept. S518)

■ **CODING DISKS**, for shaft-rotation analog-to-digital conversion, are now offered with nonlinear and decimal codes. The disks can be mounted in the manufacturer's standard 6- and 9-in. encoder housings. Decimal code disks up to 100,000 are available. Nonlinear disks can be produced if the original data can be placed on punched cards. Code disks are checked by automatic means to 1 sec of arc. (Baldwin Piano Co., Dept. S564)

■ **PULSE GENERATOR** operates in the range from 1.6 to 10.4 Mcy/sec. Pulses are half sine wave and are adjustable in amplitude from 1 to 30 v. Five pulse widths are selectable in the range from 30 to 70  $\mu$ sec. (Burroughs Corp., Dept. S561)

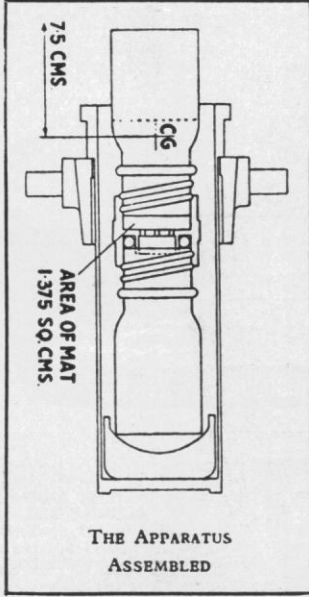
■ **THICKNESS TESTER** determines the thickness of plating and other metallic coatings deposited over various metals and nonmetals with accuracy of 90 to 95 percent. A calibration feature permits the instrument to be reset by checking with thickness standards. (Kocour Co., Dept. S558)

■ **SLIDE RULE FOR SIGHTLESS** individuals employs tactile symbols in the form of raised brads systematically arranged and hammered into a 20-in. Log Log Duplex Decitrig slide rule. The slide rule, which was designed as a gift to a blind student of electrical engineering, yields precision better than 2 to 4 percent. (Keufel and Esser Co., Dept. S562)

■ **MILLIVOLTMETER** for ultrahigh frequencies has a sensitivity of 3 mv and is usable from 1 kcy to 2000 Mcy/sec when operated with an accessory insertion unit. When the meter's probe is used, the upper frequency limit is 300 Mcy/

*For Rapid Routine Clarification and Sterilization of Small Samples of Serum and Other Biological Fluids*

# Now! CENTRIFUGAL FILTRATION . . . using the HEMMINGS FILTER



7.5 CMS

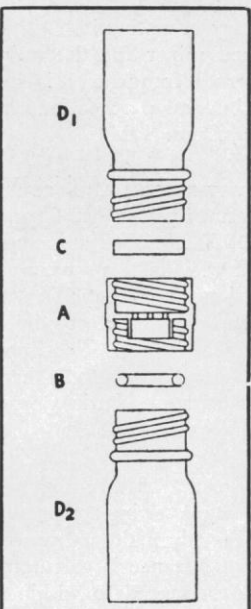
1.375 SQ. CMS

THE APPARATUS ASSEMBLED

The filter is used in conjunction with two 2-drachm pathological vials (United Glass Blowers M. 218 Est. W.F.), standard in most laboratories and Ford Sterimat filter pads 11/16" diameter. The assembly is rapidly made up, and easily cleaned. With a rubber ring sealing the receiver bottle, the whole can be autoclaved, and will remain sterile indefinitely if stored upright.

In use, paired assemblies are balanced and centrifuged at about 2,500 R.C.F. which is given by the usual clinical centrifuge. The assembly fits a 50 ml. trunnion cup without any modification being necessary; the bottles are sturdy so that there is little or no risk of breakage.

Filtration of 2 ml. of serum under these conditions is complete in 3-4 minutes, with a loss of serum by absorption into the pad of not more than 0.4 ml. The useful range of the filter is from 1 to 4 ml., with 4-drachm bottles in a larger centrifuge cup it can be extended to 12 ml.




COMPONENTS OF THE APPARATUS

A. Hemmings Filter  
B. rubber sealing ring  
C. Ford's Sterimat  
D<sub>1</sub>, D<sub>2</sub>, standard 2-fl. dr. bottles.

IMMEDIATE DELIVERY ORDER NOW!

Cat. No. SS57305—HEMMINGS FILTERS . . . per pair, \$6.50

Cat. SS57307—FORD STERIMATS . . . per 100, \$2.70



**STANDARD SCIENTIFIC**  
*Supply Corp.*

808 BROADWAY  
NEW YORK 3, N.Y.

LABORATORY APPARATUS  
REAGENTS AND CHEMICALS

sec as a voltmeter or 2400 Mcy/sec as an indicator. Voltage range is 3 mv to 10 v; or 9 mv to 500 v with dividers. (Federal Telephone and Radio Co., Dept. S539)

■ **DIGITAL-TO-ANALOG CONVERTER** provides means for connection of the manufacturer's digital differential analyzers to analog computers or analog plotters. External standard voltage sources are used to provide outputs from four ten-turn potentiometers. Standard output resolution is 0.05 percent of full scale. Output accuracy can be held to  $\pm 0.1$  percent of full scale when potentiometers with 0.05 percent linearity are used. (Litton Industries, Dept. S543)

■ **OSCILLATOR** furnishes a 1-Mcy/sec signal stable to 1 part in  $10^8$  per day. Output waveform may be either sinusoidal (3 v root-mean-square across 50 ohm) or pulse (40-v peak across 250 ohm). The pulse has a rise time of 20 msec. Usable harmonics extend to the kilomegacycle range. The fundamental frequency of the oscillator can be adjusted  $\pm 25$  cy/sec without loss of stability. Accuracy of setting is  $\pm 0.01$  cy/sec. A balanced mixer for determining unknown external frequencies is incorporated as an integral part. (Manson Laboratories, Inc., Dept. S544)

■ **WAVE-METER AND POWER-METER SET** measures power and frequency from 500 to 1500 Mcy/sec at power levels of 0.5 to 2 w. The test set consists of a transmission line comprising a coaxial step attenuator and a coaxial direct-reading frequency meter. The line is terminated in a power-measuring thermistor mount and bridge. (Narda Corporation, Dept. S545)

■ **IMPACT TESTER** measures the energy lost by a swinging pendulum when it breaks through a sample. Pendulum swing distance is calculated from swing time measured to within 0.001 sec. Interchangeable striking heads permit simulation of different kinds of impact, while detachable pendulum weights provide for a wide range of impact strengths. (United States Testing Co., Inc., Dept. S548)

■ **POWER SUPPLY** furnishes 100 ma at voltages variable from 200 to 325 v. Voltage is constant to better than  $\pm 0.07$  percent from zero to full load and to better than  $\pm 0.005$  percent for line-voltage variation of 105 to 125 v. Ripple is less than 200  $\mu$ v root-mean-square. Internal impedance is less than 0.2 ohm from 5 cy to 10 kcy/sec and less than 3 ohm at any frequency and at direct current. (L.E.E. Inc., Dept. S510)

JOSHUA STERN  
National Bureau of Standards

# The MARKET PLACE

BOOKS • SERVICES • SUPPLIES • EQUIPMENT

**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	\$22.00 per inch
13 times in 1 year	21.00 per inch
26 times in 1 year	20.00 per inch
52 times in 1 year	19.00 per inch

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

## BOOKS AND MAGAZINES

**WANTED TO PURCHASE...**

**SCIENTIFIC PERIODICALS AND BOOKS**

Sets and runs, foreign and domestic. Entire libraries and smaller collections wanted.

**WALTER J. JOHNSON, INC.**  
111 Fifth Avenue, New York 3, New York

## Your sets and files of scientific journals

are needed by our library and institutional customers. Please send us lists and description of periodical files you are willing to sell at high market prices. Write Dept. A35, J. S. CANNER, Inc. Boston 19, Massachusetts

## PROFESSIONAL SERVICES

## TO AUTHORS seeking a publisher

Learn how we can publish, promote and distribute your book on a professional, dignified basis. All subjects considered. Scholarly and scientific works a specialty. Many successes, one a best seller. Write for booklet SC—it's free.

**VANTAGE PRESS Inc.** • 120 W. 31 St., N.Y. 1  
In Calif.: 6253 Hollywood Blvd., Hollywood 28  
In Wash., D.C.: 1010 Vermont Ave., NW

## LaWall & Harrison

Div. S, 1821 Walnut St., Philadelphia 3, Pa.

SINCE 1870



## Food & Drug PROBLEMS

Pharmacological BACTERIOLOGICAL CHEMICAL

WISCONSIN ALUMNI RESEARCH FOUNDATION

## LABORATORY SERVICES for the FOOD, FEED, DRUG and CHEMICAL INDUSTRIES

Analyses, Biological Evaluation, Toxicity Studies, Insecticide Testing and Screening, Flavor Evaluation.

Project Research and Consultation

Write for Price Schedule  
P. O. Box 2217 • Madison 1, Wis.

## FOOD RESEARCH LABORATORIES INC.

OUR 35<sup>th</sup> YEAR



## RESEARCH

## ANALYSES CONSULTATION

BIOLOGICAL NUTRITIONAL AND TOXICOLOGICAL STUDIES

FOR THE FOOD, DRUG AND ALLIED INDUSTRIES

48-14 35<sup>th</sup> STREET, LONG ISLAND CITY 1, N.Y.  
Western Office—9331 VENICE BOULEVARD, CULVER CITY, CALIF.

## SUPPLIES AND EQUIPMENT

## albino rats \*

Hypophysectomized Rats

\*Descendants of the Sprague-Dawley and Wistar Strains



HENRY L. FOSTER, D.V.M.  
President and Director

THE CHARLES RIVER BREEDING LABS.  
Dept. B, Wilmington, Mass.

**Palo LABORATORY STIRRER** Model #7605  
**\$27<sup>00</sup>**

One of complete line of laboratory-tested PALO Stirrers. Inexpensive, thoroughly reliable, suitable for most laboratory stirring operations.

Write for Bulletin X-2.

**PALO LABORATORY SUPPLIES, Inc.**  
81 Reade St., New York 7

**ULTRAMICRO**  
CONTINUOUS FLOW

**ELECTROCHROMATOGRAPHY**  
KARLER-KIRK UNIT  
...WRITE FOR DATA...

**MICROCHEMICAL SPECIALTIES CO.**  
1834 UNIVERSITY AVENUE

## • HYPOPHYSECTOMIZED RATS

Shipped to all points via Air Express  
For further information write  
**HORMONE ASSAY LABORATORIES, Inc.**  
8159 South Spaulding Ave., Chicago 29, Ill.

## PROPERDIN

STANDARDIZED ASSAY REAGENTS  
RP R3

ZYMOSAN

IMMUNOLOGICAL SPECIALTIES, Inc.  
Box 24572 Los Angeles 24, Calif.

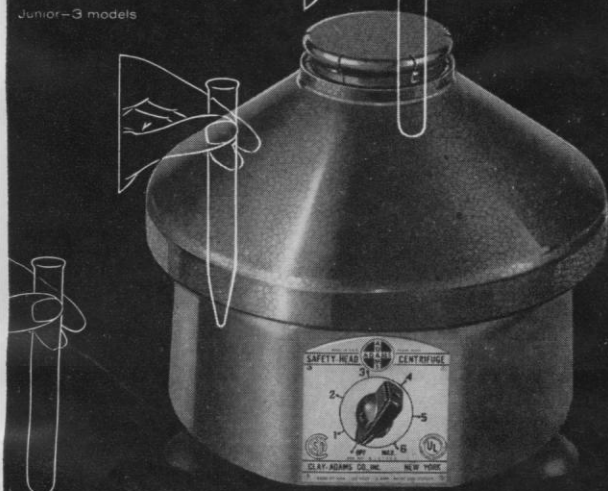
## "OUR PREVIOUS AD

created a great deal of interest, for which we are grateful. Additional advertising in your magazine is contemplated."

The most complete selection  
of table model centrifuges anywhere

#### ADAMS

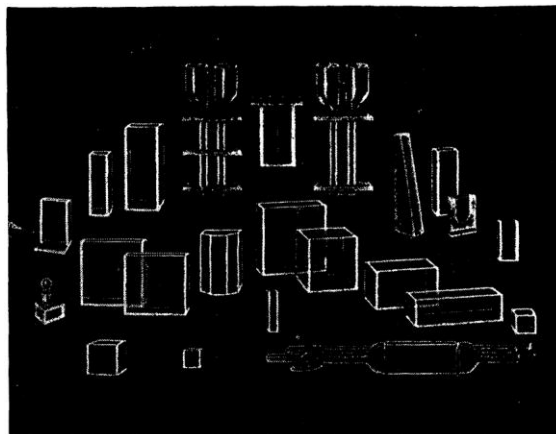
Safety-Head—3 models  
Safeguard Angle-Head—5 models  
Safeguard Standard—5 models  
Junior—3 models



All ADAMS Centrifuges are designed for rapid and efficient sedimentation. All (except Junior AC model) are permanently lubricated and ruggedly built for long, trouble-free life. Tests prove that the Safety-Head model (illustrated) is ideal for Wintrabe Hematocrit tests—gives maximum packing—35% greater efficiency than conventional, horizontal, free-swinging centrifuges.

*Clay-Adams* NEW YORK 10

## GLASS ABSORPTION CELLS made by **KLETT**



Makers of Complete Electrophoresis Apparatus

#### SCIENTIFIC APPARATUS

Klett-Summerson Photoelectric Colorimeters—  
Colorimeters—Nephelometers—Fluorimeters—  
Bio-Colorimeters—Comparators—Glass Stand-  
ards—Klett Reagents.

**Klett Manufacturing Co.**

179 East 87 Street, New York, New York

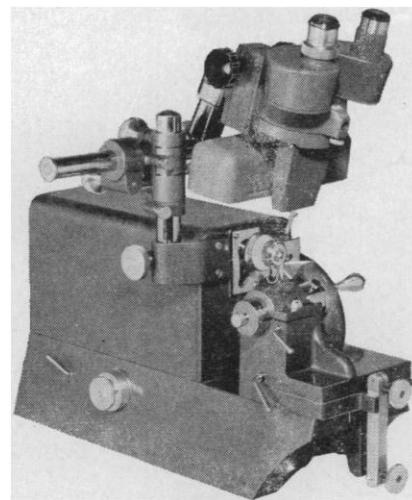
FOR RELIABLE, ULTRA-THIN SECTIONING

## SPECIFY "PORTER-BLUM" MICROTOME 1/40 to 1/2 MICRON

**SERVALL**

For the serial sectioning of a wide variety of materials including: plastics, synthetic and organic fibres, rubber, soft metal, bone, plant and biological tissue.

The only microtome with which you can cut ultra-thin and thick sections alternately—for electron and light microscope comparisons. Other exclusive features: *Dial* for selecting section thickness • *Mechanical Advancement* • *Easy to Operate* • practically *maintenance-free*.



PATENTED & PATENTS PENDING

Microtome illustrated includes optional microscope,  
linkage, and light source

WRITE FOR BULLETIN SC-85

**Ivan Sorvall, Inc.**  
NORWALK • CONNECTICUT

DESIGNERS, MANUFACTURERS AND  
DISTRIBUTORS OF "SERVALL"  
LABORATORY INSTRUMENTS

*High visibility...*



*Lifetime accuracy...*

## CENCO® Mercury Barometer

Here's a practical mercury barometer that's easy to read . . . accurate . . . capable of fine adjustment . . . and built for years of dependable service. The glass tube is completely enclosed in a hexagonal brass tube with metric and English scales attached. Constructed as prescribed by the U.S. Weather Bureau to conform to correction charts established by them. This is an unusually fine instrument at a remarkably low price.

*Order today for prompt delivery*

**No. 76890** Cenco Mercury Barometer for altitudes 0 to 4000 ft. . . . .  
each, \$53.00

**No. 76891** Cenco Mercury Barometer for altitudes from 1500 to 10,000  
feet. . . . . each, \$62.50

**No. 76892** Metal Barometer Mounting with conversion table. . . . .  
each, \$7.50



## CENTRAL SCIENTIFIC COMPANY

**General Offices and Factory**—1718-M Irving Park Rd. • Chicago 13, Ill.  
**Branches and Warehouses**—Mountainside, N. J. • Boston • Birmingham  
Central Scientific Co. of California—Santa Clara • Los Angeles  
Refinery Supply Company—Tulsa • Houston  
Central Scientific Co. of Canada, Ltd.—Toronto • Montreal • Vancouver • Ottawa