

N reagents for scientific work the prime requirements are PURITY and UNIFORMITY. It is for these qualities that we recommend and stock

# **National Stains and Reagents**

These products are especially prepared for biological purposes. The more commonly used stains bear the certification label of the Commission on Standardization of Biological Stains.

Catalogue of NATIONAL REAGENTS is obtainable on request.

Our complete stock of GLASSWARE, APPARATUS, and LABORATORY REAGENTS of standard makes enables the laboratory worker to consolidate his orders with assurance of prompt and dependable service.

WILL CORPORATION Products for Every Laboratory

Guaranteed Without Reservation ROCHESTER, N.Y.

## SIEMENS & HALSKE STANDARDIZING SET



**THE S-H Standardization Set** is made specially for us by Siemens & Halske, A.G., for checking other electrical instruments and for making precise laboratory measurements of direct current and potential.

The set is unique in that it is entirely self-contained, portable and direct reading. It rovers a wide range of current and voltage measurements, and, on account of its special features, has a considerably higher degree of accuracy than the best portable electrical indicating instruments. It is compensated for temperature changes and has special provision against errors due to stray magnetic fields.

By a very simple manipulation of switches a precision 10-ohm millivoltmeter is checkedby means of a galvanometer and dry cells-against a standard cell,-all of which are contained in the set,—and then is available for either current or potential measurements with provision for changing instantly from one to the other.

Potential ranges of 45 millivolts, 3, 150, 300 and 750 volts are included in the set. Shunts for current measurements are available in ranges as low as .015 ampere and as high

solutions for current measurements are available in ranges as low as 0.15 ampere and as high as 3,000 amperes for full scale deflection. The scale has 150 divisions. Ten ranges of these shunts may be carried in the detachable lid. The set weighs about 25 lbs. Also we supply the Siemens & Halske **Precision 10-ohm Millivolt and Voltmeter** and the Siemens & Halske **Precision Volt-Ammeter**. The latter instrument has seven self-contained current and potential ranges, each compensated for temperature changes.

#### Write for catalog 1015-S

#### Price list

Cat. No. B16082	"S-H" Standardizing Set complete as described above	
	(shunts extra)	\$270.00
Cat. No. 150001	Precision 10-ohm Millivolt and Voltmeter for 45 milli-	
	volts and 3 volts; 150 scale divisions. Complete with	
	carrying case	\$74.25
Cat. No. 560150	Precision Volt-Ammeter with 7 ranges: for .15, 1.5 and	
	15 amperes; and for .045, 3, 15 and 150 volts	\$110.25
	Precision Manganin Shunts for use with any of the	
	above instruments:	
Cat. No. 560006	Combined Shunt, ranges: .015, .03 and .075 amperes	\$20.25
Cat. No. 560007	Combined Shunt, ranges: .15, .3 and .75 amperes	\$13.50
Cat. No. 560008	Combined Shunt, ranges: 1.5, 3 and 7.5 amperes	\$14.40
Cat. No. 560009	Combined Shunt, ranges: 15 and 30 amperes	\$15.30
Cat. No. 560010	Single-range Shunt for 75 amperes	\$9.00
Cat. No. 560011	Single-range Shunt for 150 amperes	\$9.00
Cat. No. 560012	Single-range Shunt for 300 amperes	\$15.30
Cat. No. 560024	Precision Combined Multiplier, for use with Cat. No.	
	560001 Millivoltmeter, ranges: 15, 150, 300 and 750 volts.	\$36.00

We carry these instruments in stock. Prices are net f. o. b. Philadelphia warehouse.

#### JAMES G. BIDDLE

ELECTRICAL AND SCIENTIFIC INSTRUMENTS

#### 1211-13 ARCH STREET, PHILADELPHIA

SIEMENS & HALSKE PRECISION INSTRUMENTS "POINTOLITE" LAMPS GALVANOMETERS DIRECT READING OHMMETERS "MEGGER" TESTING SETS LABORATORY POTENTIOMETERS LANGMUIR CONDENSATION HIGH VACUUM PUMPS AND OIL-SEALED ROTARY VACUUM PUMPS LABORATORY AND WORKSHOP RHEOSTATS SPEED-MEASURING INSTRUMENTS STANDARDS OF RESISTANCE





ADDRESS INQUIRIES TO SALES OFFICE





Long years of experience and continuous factory operation, coupled with fortunate climatic and physical conditions, have enabled the Munktell Factory, at Grycksbo, Sweden, to supply the Chemists of the world with an unequalled product.

Aside from the chemical constitution of the paper, which can, of course, be controlled by the laboratory of the factory, other constituent features can only be attained by expert hand manipulations, as for instance the weight, texture and uniformity, for it must be remembered that all chemists' filter paper must from its very character be hand made. Transient help of workmen trained in other lines of paper manufacture, especially those who have worked in factories where paper is made by machinery, cannot be of much use. For generations the sons and daughters of the workmen in this factory have succeeded their parents, and the same is true at this date. In this way the necessary "touch" has been developed in these workers from their childhood on.

As the chemical industries have developed, so also has this factory enlarged its line so that at the present time, as sole United States agents, we are able to offer from stock, for prompt shipment, a grade of Munktell's chemists' filter paper to meet any known requirement.

Descriptive pamphlet and samples of paper furnished upon request.







**Patent Applied For** 

## The LaMotte Roulette Comparator

offers the greatest possible convenience and accuracy in the determination of the *exact degree* of acidity or alkalinity of solutions, (i.e., the hydrogen ion concentration).

Because of its practical value, this equipment is being adopted in continually increasing numbers by many branches of science and industry.

Send for our new brochure, containing an explanation, in simple language, of the meaning of hydrogen ion concentration and descriptions of the various LaMotte Sets with the particular applications of each.

LaMotte Chemical Products Co. 418 Light St. Baltimore, Md., U. S. A.

# Research Engineer Wanted

By large manufacturer of physiotherapy apparatus, located in central states. Must be especially capable in electricity, physics, and radiations, and have a good understanding of chemistry. Must be capable of carrying on basic original researches. Only a thoroughly competent individual could be considered. Give complete experience and history in first letter.

Address "L. G."

3941 Grand Central Terminal, New York, N. Y.



Estimate GLUCOSE by an

# Eastman Organic Chemical

(Made in U. S. A.)

called 2153 I-Nitroanthraquinone-5-sulfonic acid.

The method is simple and one may determine the approximate amount of sugar in blood without the aid of a colorimeter.

The method is only applicable to dilute solutions of glucose. Details of the method will be sent upon request or see article by J. A. Milroy, Biochemical Journal 19, 749, (1925).

Over 2300 Other Organic Chemicals are In Stock

Write now for List No. 15 America's Handbook of Organic Chemicals

# Eastman Kodak Company

Research Laboratories

Rochester, N. Y.





## MICROSCOPE ESA

### A Convenient Laboratory Instrument

Mechanical Equipment: Simplified Mechanical Stage, 12 cm. diameter, Quadruple Nosepiece, Fine Adjustment with graduated drum, Rack and Pinion Condenser Movement. Optical Equipment: Condenser n.a. 1.2 with Iris. Achromatic Objectives: 8 n.a. 0.20, 40 n.a. 0.65, 90 n.a. 1.25 (Oil Immersion). Huygens Oculars: 7x and 10x. Magnifications 56x to 900x.

Price, in cabinet, \$132.00 f. o. b. New York

CARL ZEISS, INC. 153 West 23rd Street New York

