amply demonstrate that the so-called "triple inheritance" discussed by Race and Sanger in the third edition of their book is fictional, since, as is shown in Table 1, the blood factors are inherited not in three's but in blocks varying from two to seven factors each. Perhaps the C-D-E notations are simpler; but the question involved is not merely one of choice between two designations for the same thing, and workers must decide whether they prefer to do what is simpler or what is correct.

The protest that the report prepared by the American Medical Association committee by four leading scientists is biased, and that the signers of the protest "shall continue to use the C-D-E nomenclature until such time as a properly representative international body arrives at a definite nomenclature" is misleading. The protest fails to mention that for the past decade Wiener has urged that such an international committee be formed, and that before the American Medical Association report was prepared, Fisher and Race were both invited, all expenses paid, to discuss the problem, but they declined.

ALEXANDER S. WIENER
Office of the Chief Medical Examiner,
New York City

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 858.

- SCINTILLATION TRANSDUCERS, consisting of a thallium-activated sodium-iodide crystal optically joined to a 2-in. multiplier phototube, are available with crystals up to 2 in. in diameter and 3 in. long. Variations such as truncated conical ends, drilled wells, or other configurations can be provided. (Levinthal Electronic Products, Inc., Dept. 385)
- INTEGRATOR is a tachometer-feedback, velocity-servo type; a mechanical differentiator is part of the servo link. Calibration is built-in, with 60 cy/sec line frequency as a reference. Linearity is ±0.25 percent, and accuracy is ±0.15 percent of full scale. Dynamic range is 52 db. Zero drift is less than 1 count/hr. Time from stop to full speed is 0.14 sec; time, full speed to stop, is 0.09 sec. (Research Appliance Co., Dept. 386)
- ELLIPSOMETER for the measurement of extremely thin films by the use of elliptically polarized light comprises a spectrometer modified by the addition of a special arm that supports a compensator and its circle. The two telescopes of the spectrometer carry 14-mm polarizing prisms mounted in vertical divided circles. On the central table is mounted a bracket to which is clipped a polished, stainless-steel plate to take the film under observation. (Gaertner Scientific Corp., Dept. 394)
- DISPLACEMENT is measured by a device that includes a transducer and associated electronic circuits. The transducer is a precision optical grating and photoelectric sensing head. A separate cabinet houses circuits that determine the direction of motion and control bidirectional counters of cold-cathode type. Accuracy is 0.0001 in. and counting rate is 5 kcy/sec. Electrical as well as visual output is provided. Single-axis and double-axis systems are available. (Ferranti Electric, Inc., Dept. 395)
- ELECTRIC FURNACE performs continuously at temperature of 2700°F. Globar elements are used for heating. A temperature indicator-controller permits selection of temperature. Size of working chamber is 4 by 8 by 4 in. (Blue M. Electric Co., Dept. 396)
- SHAKING BATHS feature variable speeds, variable stroke, and variable temperature from 0° to 100°C. Two sizes are available, 26 by 12 by 7 in. and 36 by 18 by 9 in. Baths are made of stainless steel with 1-in. insulation. Tem-



Most complete catalog ever . . . easy to read, easy to use . . . current, up-to-the-minute data. If your laboratory hasn't received its free copy,

139 Fisher Bldg., Pittsburgh 19, Pa.



write today to:

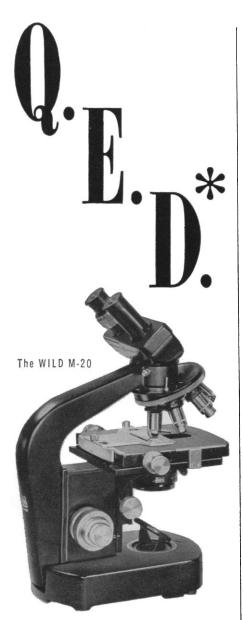
FISHER SCIENTIFIC

America's Largest Manufacturer-Distributor of Laboratory Appliances & Reagent Chemicals

IN THE U.S.A.
Boston
Buffalo
Charleston, W.Va.

Chicago Cleveland Detroit New York Philadelphia Pittsburgh St. Louis Washington IN CANADA Edmonton Montreal Toronto

B-86b



Finest Swiss craftsmanship insures superior quality, ease of operation and incomparable design. The WILD M-20 Microscope is available for immediate delivery.

Sextuple revolving nosepiece is optional.

Built-in illumination (20W).

Beam splitting phototube permits binocular focusing for photomicrography.

Phase contrast and other attachments for virtually every observation method.

Send for Booklet M-20.

*Quod erat demonstrandum



Full Factory
Services
INSTRUMENTS, INC.

MAIN AT COVERT STREET,

PORT WASHINGTON, NEW YORK

PORT WASHINGTON 7-4843

perature control to $\pm 0.5\,^{\circ}\mathrm{C}$ is provided by a hydraulic thermostat. A removable hood with built-in heater, fan, and thermostat permits operation with hot air instead of water. (Labline Inc., Dept. 397)

- TWELVE-CHANNEL RECORDER uses ink or electric writing in rectangular coordinates. Frequency range is d-c to 200 cy/sec. Eighteen chart speeds, from 0.5 cm/hr to 20 cm/sec, are available. Sensitivity is 200 ma r.m.s. (full-scale). Nominal impedance is 1000 ohm. The recorder is designed for 19-in. rack mounting. (Massa Laboratories, Inc., Dept. 393)
- FLOWMETER utilizes electromagnetic induction to produce an a-c voltage proportional to flow. The output signal is measured by a potentiometer-type indicator-recorder. Accuracy is ±1 percent of full scale if maximum flow velocity is above 3 ft/sec and ±3 percent if maximum velocity is 1 ft/sec. Reproducibility is ±0.5 percent of full scale. (Fischer and Porter Co., Dept. 398)
- OPTICAL GONIOMETER enables measurement of the interfacial angles of crystals. The goniometer is a two-circle instrument of simplified design capable of accuracy of ±3 min of arc. It is designed for use by chemists in identifying crystalline materials. (Arthur S. LaPine and Co., Dept. 399)
- LIQUID AGITATION APPARATUS consists of a stainless-steel oval enclosure in which are housed a synchronous motor and speed control mechanism. A platform 11 in. in diameter, mounted tiltably on the motor, carries 12 test tubes. Rotational speeds are 15 to 80 cy/min. Platforms designed to hold other types of containers are interchangeable (New Brunswick Scientific Co., Dept. 401)
- EXPLOSIVE ACTUATOR is designed to be threaded into place with accurate positioning. The end of the device is closed with a copper diaphragm that will extend 1/16 in. upon actuation. Gaseous products of explosion are retained within the device after actuation. (Holex Inc., Dept. 402)
- GYRO-TEST TURNTABLE is designed for testing low-drift gyros in either open or closed loop. Tilting permits drift tests on polar, vertical, inverse vertical, and horizontal axes. Accuracy of the rotation dial is 2 sec of arc. Gearing and slip rings are completely enclosed. A two-speed synchro table-rotation transmitting system is available for remote recording. (Sterling Precision Corp., Dept. 403)

Joshua Stern
National Bureau of Standards

for work in a controlled atmosphere



BLICKMAN VACUUM DRY BOX

Designed for safe handling of radio-isotopes, reactor fuel containing Plutonium or U233 and other hazardous substances. With air-lock, it can be sealed to create a vacuum. Fabricated of stainless steel plate—34" long x 26" high x 24" wide at base. Air-lock measures 18" x 12". Send for Technical Bulletin A-2.

FOR SAFE HANDLING OF RADIOACTIVE MATERIALS



BLICKMAN FUME HOOD

Originally designed and developed for the AEC, this Fume Hood assures maximum safety in the handling of radioactive materials and radioactive isotopes. Sturdy 14-gauge stainless steel, round corner construction provides long life...easy cleaning and decontamination. Send for Technical Bulletin E-3. S. Blickman, Inc., 6910 Gregory Avenue, Weehawken, N. J.

BLICKMAN LABORATORY EQUIPMENT

Look for this symbol of quality





A Portion of the Sigma Reagent Catalog

One of a series of advertisements which will reproduce the complete list. Complete list available promptly on request. Other package sizes shown in complete catalog

β GLUCURONIDASE, Bacterial Powder 25	5,000 Units 5.75
Stock No. 105-8. Will yield almost 12	5,000 Units 22.75
Stock No. 105-8. Will yield almost 12.	5,000 Units 22.75
100% hydrolysis of many difficulty 250	0.000 Units 40.25
split Characonides at pH 7 Benerted EO	0,000 Units 72.25
to be the preferred enzyme for hy- 1,000	0.000 Units 140.25
drolysis of Estrogens. Usually 50 to 2,000	0000 Unite 270 25
diolysis of Estrogens. Osually 30 to 2,000	,000 Office 270.23
100,000 Sigma Units per gm,	
Reagents for determination of β -Glucuronidase p	or Bull 105
105-1 Phenolphthalein Standard Solution	25 ml 1.60
1 mg per ml	
	1.4 (1 4.50
105-2 Buffer, Glycine, 0.2M; pH 10.4	16 fl. oz. 4.50
105-3 Buffer, Acetate, 0.15M; pH 6.0	16 fl. oz. 4.50
	10 11. 02. 1.30
(105-9 is Better)	
105-9 Buffer, Phosphate .075M; pH 6.8	16 fl. oz. 4.50
105-4 Phenolphthalein Glucuronidate 0.01M	25 ml 29.50
GLUTAMIC DECARBOXYLASE (pfs)	1 gram 15.00
GLUTAMIC DEHYDROGENASE, Cryst. From live	er (pfs) Inquire
GEOTAMIC DELITIONOGENASE, CIVST. FIGHT INVE	
GLUTATHIONE, OXIDIZED FORM (pts)	i gram 10.00
GLUTATHIONE, OXIDIZED FORM (pfs) GLUTATHIONE, REDUCED FORM (pfs)	1 gram 3.00
CLYCED ALDELY OF DI	5.00
GLYCERALDEHYDE, DL (pfs)	1 gram 5.50
GLYCERALDEHYDE PHOSPHATE	1 gram 75.00
DEHYDROGENASE (GAPD), 5 x Cryst. (pfs)	100 mg 12.50
α GLYCEROPHOSPHATE DEHYDROGENASE.	
From Muscle, Cryst, (pfs)	Inquire
GLYCINE BUFFER pH 10.5 Stock No. 104-5	16 fl. oz. 4.50
GLYCINE BUFFER 0.2M; pH 10.4 Stock No.	
105-2	16 fl. oz. 4.50
GLYCOLALDEHYDE (pfs)	1 gram 8.00
GLYCL-GLYCINE or GLYCYL-GLYCINE HCI	1 gram 1.40
GLYOXYLIC ACID, Sodium Salt	1 gram 2.00
GMP—See Guanosine-5-Phosphoric Acid	
G-5-P—See Guanosine-5-Phosphoric Acid	
GONADOTROPIN, CHORIONIC (pfs)	1 vial 7.50
From human pregnancy urine	5 vials 30.00
10,000 I.U. per vial.	10 vials 50.00
GTP—See Guanosine Triphosphate	= '
	1 2.00
GUANINE (pfs)	l gram 2.00
(2-Amino-6-hydroxypurine)	5 grams 7.50
GUANINE SULFATE	10 grams 3.80
(2-Amino-6-hydroxypurine sulfate)	100 grams 30.00
GUANOSINE DIPHOSPHATE, Sodium 95-100%.	500 mg 350.00
From Yeast or Muscle, as available.	100 mg 100.00

	item is too	
request	co-operative	allowance.

GUANOSINE-5-PHOSPHORIC ACID	Sodium	F	ree Acid
95-100%. From Yeast or	150.00	1 gm	225.00
Muscle, as available.	23.50	100 mg	38.00
GUANOSÍNE TRIPHOSPHATE, Sodium	95-100%.	l gm	300.00
From Yeast or Muscle, as available.	, 0 .	25 mg	17.00

25 mg 10 mg

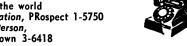
36.00 18.00

Note: Price reductions are anticipated on all high-cost Nucleotides.

HEMIN, 2 x Cryst. (Bovine) (pfs) HEMOGLOBIN, 2 x Cryst. (Bovine) (pfs) HEXOKINASE, Crude, Type II Activity about 50,000 K.M. units/grame. Routinely to Non-Profit Institutions.	1 gram 5.00 1 gram 6.00 1 gram 6.00 1 gram Gratis
HEXOKINASE, Practical Type III Activity approximately 150,000 K.M. units/gram, Substantially Glucose-free.	1 gram 15.00 5 grams 67.50
HEXOKINASE, Type IV May be available. Activity approx. 300,000 K.M. units per gm HEXOKINASE, Type V Activity 500-600,00 K.M. units per gm. May be available. HEXOKINASE—Higher Purity and Crystalline HISTIDINE DECARBOXYLASE (pfs)	1 gram 45.00 100 mg 8.00 1 gram 120.00 100 mg 22.00 Inquire 1 gram 15.00

TELEPHONE COLLECT from anywhere in the world

Day, Station to Station, PRospect 1-5750 Night, Person to Person, Dan Broida, WYdown 3-6418



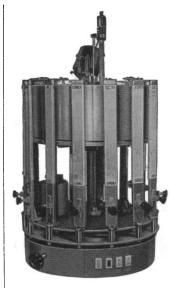
The Research Laboratories of

CHEMICAL COMPANY

3500 DEKALB ST., ST. LOUIS 18, MO., U. S. A.

MANUFACTURERS OF THE FINEST BIOCHEMICALS AVAILABLE





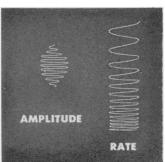
Model WB-4

Ultra-compact—smallest available. Only 20" base diameter. Integral construction—14 manometers. Amplitude and rate continuously variable. Write for complete information.



the **Ultra-Compact** 20-inch WARBURG

continuously variable



MIDDLETON, WIS. On Madison's West Beltline Highway

Γ

The International Geophysical Year has greatly increased the use of Microcards for scientific material. It is, therefore, not surprising that we have had to reprint SCIENCE on Microcards for the years from 1953 on.

The first half of 1958, volume 127 of SCIENCE, is now also available in this form. The space saving is substantial: 35 sets of cards occupy the space of one set of SCIENCE.

The price has remained unchanged, \$7.50 per volume.

Order now from

SCIENCE,

1515 Mass. Ave. NW, Washington 5, D.C.

SCIENCE ON MICROCARDS

\$7.50 per volume

\$15.00 per year

□ 1953 □ 1954 □ 1955 □ 1956 □ 1957 □ 1958 (vol. 127)

3 AAAS SYMPOSIUM VOLUMES OF WIDE INTEREST

ALCOHOLISM — BASIC ASPECTS AND TREATMENT

Edited by Harold E. Himwich

6" x 9", 220 pp., references, index, cloth, 1957, reprinted 1958 \$5.75 AAAS members' cash order price \$5.00

"This book is the latest and one of the most authoritative documents on this subject to be published. It is completely up-to-date and includes all the recently discovered methods in the basic aspects and treatment of alcoholism. The book is well organized and written in such a way that anyone with a background in general science and the humanities can understand it."

Psychosomatic Medicine, November 1957*

TRANQUILIZING DRUGS

Edited by Harold E. Himwich

6" x 9", 205 pp., 32 illus., references, index, cloth, 1957, reprinted 1958 \$5.00 AAAS members' cash order price \$4.50

"This volume is required reading for all who are interested in psychiatric drugs. The reports present a broad and stimulating cross-section of the various lines of investigation that are being so assiduously pursued all over the country."

American Journal of Pharmaceutical Education, (21, 4, 1957)

PSYCHOPHARMACOLOGY

Edited by NATHAN S. KLINE

6" x 9", 175 pp., references, index, cloth, 1956 \$3.50 AAAS members' cash order price \$3.00

"This symposium volume should be of deep interest and great value to all workers in hospital psychiatry, and likewise for psychiatrists in private practice."

American Journal of Psychiatry, April 1958

Special prices for AAAS members are for orders submitted together with payment

To:	American Association for the Advancement of Science 1515 Massachusetts Avenue, NW, Washington 5, D.C.
	I herewith order the volumes indicated above.
	My check for \$ is enclosed.
NAME	
ADDRESS	
CITY	ZONE STATE

for immediate
shipment
from our
stock

METTLER BALANCES

METTLER SINGLE PAN, DIRECT READ-ING BALANCES incorporate the principle of constant sensitivity substitution weighing in combination with efficient damping, built-in weights and optical presentation of the result. They are outstanding for speed, accuracy and convenience for many types of laboratory purposes.

For analytical work of maximum accuracy, the B series and the unique M-5 model overcome tedium and uncertainty in important sample preparation.

For bulk weighing, dispensing, packaging, weight conformity inspection and other tasks requiring medium accuracy, the K series platform type fulfill a comparable purpose.

For weighings of sub-analytical nature in industry, teaching, etc., the new H series covers the range between the B and K series. They incorporate features of both, i.e. total enclosure and multiple weight manipulation as in the B series, and reduction in number of individual reference weights by means of extended optical scale as in the K series.

Taring is provided for in the B and H series and in the T models of the K series.

AHT Co. Cat. No.	Model	Capacity grams	*Accuracy within optical range	Optical scale range	Price
1867-J	B-5	200 gms	±0.05 mg	115 mg	895.00
1888-C	B-6	100 gms	$\pm 0.02~\mathrm{mg}$	115 mg	995.00
1888-M	M-5	20 gms	±0.002 mg	20 mg	1,380.00
1887-J	H-3	160 gms	±1.0 mg	1200 mg	550.00
1887-H	H-4	160 gms	±0.5 mg	1200 mg	585.00
1887-F	H-5	160 gms	±0.1 mg	1200 mg	650.00
1924-B	K-5	2000 gms	±0.2 gms	1000 gms	465.00
1924-B	K-7	800 gms	±0.03 gms	100 gms	560.00
1924-C	K-5T	2000 gms	±0.2 gms	1000 gms	535.00
1924-C	K-7T	800 gms	±0.03 gms	100 gms	660.00

^{*}Accuracy beyond the optical scale range is limited to Class tolerances of weights incorporated.



ARTHUR H. THOMAS COMPANY

More and more laboratories rely on Thomas

Laboratory Apparatus and Reagents

VINE ST. AT 3RD • PHILADELPHIA 5, PA.