**T/F (TIME/FLOW TYPE) FRACTION COLLECTOR**

Let the Technicon Fraction-Collector take over the tedious chore of fraction-collection in your laboratory... it will increase work output, give higher resolution, save staff time and labor. Completely automatic, it needs only to be set up for a given experiment, which it will then carry to completion, turning itself off when the job is done. The T/F model here will handle routine fractionation competently. Based on a simple rate-of-flow principle, it will collect any number of samples up to 200, each sample comprising any volume from a few drops up to 28 cc (or more, on special order).

**P/E (PHOTO/ELECTRIC) DROP-COUNTING COLLECTOR**

For hyper-critical determinations, this Technicon Collector employs a photo-electric drop counter and totalizer, shown here. Each collection will comprise an identical number of drops, yielding samples of identical volume. Send for the detailed bulletin describing these precision Technicon instruments.
Sanborn two-channel instruments for the simultaneous recording of two physiological phenomena*

*Phonocardiogram of DIAGNOSTIC quality with High-deflection-speed electrocardiogram

OR, two other physiological phenomena in combination.

*Electrocardiogram with one other physiological phenomenon

OR, two other physiological phenomena in combination.

DIRECT WRITING

CARDIETTE

Equipped with one ECG amplifier and one heart sound amplifier. Both are removable and interchangeable. Additional ECG amplifier available if recording of cardiograms and/or other physiological phenomena in combination is desired. Paper speeds 2.5, 25 and 75 mm/sec. AC power operated. 6cm. bromide paper.

CARDIETTE

Each of the two channels may include either a Carrier Type or General Purpose Amplifier, or the latter in combination with either ECG or DC Preamplifiers. Amplifiers and preamplifiers interchangeable. Five dual sets of speeds -5 and 0.5, 10 and 1, 25 and 2.5, 50 and 5, 100 and 10 mm/sec. 5 inch recording Permapaper.

Sanborn Company

CAMBRIDGE 39, MASSACHUSETTS

November 21, 1952
SEQUESTRENE is a powerful chelating agent for the alkaline earths and heavy metals, forming water soluble complexes of unusual stability. SEQUESTRENE will dissolve calcium oxalate and other sparingly soluble inorganic compounds, will keep iron dissolved in alkaline solution, deactivate trace metals.

SEQUESTRENE is a new chemical tool offering the research worker in the chemical and biological sciences still unexplored opportunities for investigating and controlling inorganic cation effects.

SEQUESTRENE has already proven useful as a preservative for whole blood and platelets... in treatment of renal lithiasis, metal poisoning, capillary damage, hypertension... in purification of proteins and other biological materials... in deactivating or activating enzyme systems... in formulation of plant nutrient solutions... in treatment of iron deficiencies in agricultural crops... as a decontaminant for radioactive metals... as an analytical reagent for trace minerals... as a component of bacterial culture media... as a stabilizer for metal sensitive materials such as rubber latex, food products, ascorbic acid, hydrazine, peroxide, mercaptans... and in flotation, mineral separations, detergents, chemical synthesis, metallurgy and photography.

ALROSE CHEMICAL COMPANY
Box 1294 • Providence 1, Rhode Island • Williams 1-3000
RESEARCH BIOCHEMICALS
For INVESTIGATIONAL USE

AMINO ACIDS

A complete selection of more than 90 amino acids of maximum purity including:

- DL ALPHA ALANINE
- BETA ALANINE
- L ALANINE
- DL ALPHA AMINO-3-BUTYRIC ACID
- L ARGinine (HCl, Free Base)
- ASPARAGINE (L, DL, D)
- ASPARTIC ACID (L, DL, D)
- BETAIN
- DL CITRULLINE
- CREATINE
- CREATININE
- CYSTEINE (HCl, Free Base)
- CYSTINE (L, DL)
- DL DOPA
- DJENKOLIC ACID
- DL ETHIONINE
- GLUTAMIC ACID (L, DL, HCl)
- GLUTAMINE
- GLYCYL GLYCINE
- HISTIDINE (L, DL, D)
- DL HOMOCYSTEINE
- DL HOMOCYSTINE
- HYDROXY-L-PROLINE
- Isoleucine (L, DL, D)
- LEUCINE (L, DL, D)
- LYSINE HCl (L, DL)
- METHIONINE (L, DL, D)
- METHIONINE SULFOXIDE
- DL NORLEUCINE
- ORNITHINE HCl (DL, L)
- PHENYLALANINE (L, DL, D)
- PROLINE (L, DL)
- SEROSINE
- DL SERINE
- B PHENYL SERINE
- TAURINE
- THREONINE (L, DL, D)
- DL ALLO THREONINE
- TRYPHTOPHANE (L, DL, D)
- TYROSINE (L, DL)
- VALINE (L, DL, D)

ALSO—A SELECTION OF 20 PEPTIDES

WRITE FOR

NEW CATALOGUE

#S 975

Listing over 600 Research Biochemicals

PHOTOVOLT Densitometer for
CHROMATOGRAPHY

A photoelectric precision instrument for the rapid and convenient evaluation of strips and sheets in filter paper chromatography and paper electrophoresis

PHOTOVOLT CORP.
95 Madison Ave. New York 16, N. Y.

Also

Colorimeters pH Meters
Fluorimeters Electronic Photometers
Reflection Meters Multiplier Photometers
Interference Filters

A new and complete line of paper chromatographic equipment carefully engineered for use in this new field of analysis.

Nutritional Biochemicals Corporation
CLEVELAND 28, OHIO

Write for Catalog CHROMATOGRAPHY DRYING OVEN

Research Equipment Corporation
1135 THIRD STREET, OAKLAND 20, CALIFORNIA DEPT. S
Yesterday this was an Empty Room

To convert an empty room into a modern, completely equipped, operating chemical laboratory figuratively overnight is quite a feat . . . even for Fisher! But we did it.

At 3:30 one afternoon came urgent instructions from an eastern metals firm. At 4:45 our shipping department was getting out the order. The next morning the customer was uncrating the complete laboratory assembly, and by that afternoon every section of Fisher Unitized Furniture was in place.

We'd prefer not to be quite so rushed. But we could do it again because Fisher scientifically planned laboratories are made up to your exact specifications from modular, unitized steel laboratory furniture of most practical design.

More than 21 basic units are available from stock. Put together to meet your requirements, the result is an integrated laboratory, completely modern in appearance and efficiency.

Providing complete laboratories is only one facet of our interesting business. Implementing them with apparatus, instruments, supplies, reagent chemicals, glassware, even to suggested procedures and techniques, are others. Everything but providing the chemist, metallurgist or technician himself!

Whatever your laboratory problem or need . . . take it to Fisher first.


Fisher Scientific
America's Largest Manufacturer-Distributor of Laboratory Appliances and Reagent Chemicals

November 21, 1952
The power to get ideas and information across quickly and surely forged ahead with the development of modern audio-visual aids. And for flexibility, efficiency, and clarity of graphic presentation in teaching, no other medium can equal the effectiveness of the Master VU-GRAPH.

With the VU-GRAPH, the teacher faces his audience, in a fully lighted room, while he projects his material to a brilliantly lighted screen in black-and-white or color. He can make difficult points easily understandable by means of progressive disclosures, overlays, and plastic working models. This applies especially in such areas as science, mathematics, manual arts, physical education, and academic subjects. Or support his presentation by projecting erasable notes, sketches, and diagrams, better than by using a blackboard.

An entire lecture can be easily prepared in advance, and delivered with each element in its proper sequence. Also, 3¼x4 and 2x2 slides, and 35 mm film strips, can be projected, with suitable attachments.

Every school should have a Beseler VU-LYTE opaque projector. It offers the most for the least expense. First cost is moderate and upkeep negligible. Materials for projection require no mounting or special holders. These can include maps, diagrams, pictures, text, and 3-dimensional objects. Projection is so vivid in a partially lighted room as to focus and grip the students' attention. Operation is so simple, it can be performed by anyone.

Sheets of varying sizes up to 10x11 are held flat without flutter by the Vacumatic* Platen. The Feed-O-Matic* Conveyor automatically feeds and ejects the copy in perfect sequence. The exclusive, built-in Pointex* Projection Pointer permits the teacher to remain beside the VU-LYTE pointing out salient features on the screen with a movable arrow of light.

Folders available describe these and other visual aids, and show how they get your ideas over more directly and effectively. They will be sent on request, or a free demonstration arranged at your own convenience.
What GENERAL ELECTRIC People Are Saying

J. P. DITCHMAN
Lamp Division

APPLICATION OF LIGHT IN AGRICULTURE: Many people are working on the use of lamps and electrical traps as a means of crop insect pest control.

Literature on the movements of insects and other responses towards or away from the light sources is very fascinating because it shows that every conceivable variation of radiant energy, spectral distribution, orientation, quantity, duration, intensity, etc., may have some action on the insects or animals. Just to mention one of these with which we are familiar, the effectiveness of the light source in attracting nocturnal insects. Researchers in this field have indicated that most nocturnal insects have receivers that are sensitive to the blue and the ultraviolet part of the spectrum. This is being used to particular advantage in agricultural fields where sources of ultraviolet and visible blue are being used to attract the corn-borer moth, cotton ball worm, and others to their destruction. The fluorescent black-light lamp has been so attractive in tests conducted during the last few years that the ordinary high-voltage traps being used to electrocute the moths have been clogged by the tremendous flight of the insects. Work has not progressed far enough to recommend this use to farmers to stop the scourge of these insects, but light traps are being used as indicators to give the farmer warning when he should use control measures against the flight of any particular pest.

Am. Soc. of Agricultural Engrs.
Chicago, Illinois

★

W. R. G. BAKER
Electronics Division

MANAGEMENT OF RESEARCH AND DEVELOPMENT: Just as the progress of research and development cannot be measured in monetary terms, neither can it be measured in terms of numbers of engineers, or physicists, or chemists. It must be measured in the extension of human knowledge, and in the application of that knowledge. The trend today is to shorten the time between the extension of knowledge and its application, a task which becomes more difficult as we bring more important minutiae into our understanding.

There is a growing recognition of the fact that time is a fourth dimension in scientific progress, and a dimension of increasing importance. The interrelation today of what were dis-associated sciences yesterday is a strong indication that if the state of the art in one branch of science moves too far ahead, the expenditure of man-centuries of engineering effort may not produce marked further progress. A period of "catching-up" may well be required.

National Convention, IRE
New York City

★

H. A. WINNE
Engineering

RESEARCH AND INDUSTRIAL PROGRESS: The number of industrial organizations that can support programs of fundamental research in their own laboratories is not great, but it is important that all industry recognize the importance of this type of research and support it in every way possible.

The extent to which industry fosters the kind of intellectual environment that is essential to creative work will determine, in a large measure, the dividends from research that it may expect to receive over the next 50 years.

The trick is to see around the corner—or, failing that clairvoyant sense, to make a fair guess as to what may lie just around the corner and to play the research program accordingly.

A research program that is well integrated with the business interests of the company is as much a part of the continuous operation of the business as is the maintenance of a plant that is well adapted to company needs. Consequently the research program must be protected from interruptions that might follow minor fluctuations in the business cycle.

Centennial Conf. on Industrial Research
Chicago, Illinois

You can put your confidence in

GENERAL ELECTRIC
Drying Problem Solved by New Method

New, Niagara “Controlled Humidity” Method provides air at precise conditions of temperature and humidity and permits accurate variations of such conditions at will, in the range of 34°F. to 140°F.; also below 32°F. if required.

This Method uses “Hygrol” liquid absorbent to remove moisture from the air directly, saving the cost of refrigeration for dehumidification. Operation is completely and reliably automatic; the absorbent is re-concentrated as fast as it is used.

It is used successfully in drying processes, control of hygroscopic materials, preventing moisture damage to materials or instruments, providing controlled atmosphere for tests and experiments. Units provide capacity ranges from 1000 c. f. m. to 20,000 c. f. m.

Write for Bulletin No. 112; address Niagara Blower Co., Dept. SW. 405 Lexington Avenue, New York 17, N.Y.

PHASE CONTRAST ACCESSORIES

A $550 value! No finer quality at any price, Complete outfit for any standard laboratory or research microscope includes: 4-phase objectives (10x, 20x, 40x, 100x); rotatable turret-type changer; Iris diaphragm; Abbe condenser; centering telescope; filter; cabinet. Choice $349 Prepaid of 4 contrasts.

PHOTOMICROGRAPHY SET

Use your present camera (35mm., No. 120, etc.) to take photos with any standard microscope. Illustrated with 35mm. camera and laboratory microscope described below. Focusing telescope permits critical focusing and continuous observation of specimen. $39.95 Postpaid

50-1500X LABORATORY MICROSCOPE

Outstanding value in an instrument made to highest professional standards. Completely equipped with mechanical stage, Abbe condenser and iris diaphragm, rack and pinion substage, 3 eyepieces, 3 objectives, including oil immersion, wooden cabinet, etc. (four objective model available). $198 Express collect.

25% deposit required on C.O.D. shipments.

Send check or M.O. or write for illustrated literature to:

UNITED SCIENTIFIC CO.
204-6 Milk St., Dept. R-102, Boston 9, Mass.
Now helping to chart new frontiers in all fields of scientific research, the Leitz Ortholux is universally recognized as the ultimate in research microscopes. In addition to outstanding precision and quality, it gives you all the features needed for easier, less tiring microscopic observation. To make the Ortholux even more useful, Leitz now offers a combination monocular-binocular tube which enables you to photograph the microscope image without changing tubes. You change instantly from microscopic observation to photomicrography.

All yours in one outstanding instrument—
- Built-in illumination system for transmitted or incident light
- Berek double-diaphragm condenser
- Large, square built-in mechanical stage with low set drive
- Low set micrometer fine adjustment on double ball bearings
- Counter-balanced coarse focusing

Another of the famous Leitz Microscopes... recognized everywhere as the finest microscopes produced anywhere since 1849.

For further information write Dept. 104SC.

E. LEITZ, Inc., 304 Hudson St., New York 13, N. Y.

LEITZ MICROSCOPES • SCIENTIFIC INSTRUMENTS • BINOCULARS
LEICA CAMERAS AND ACCESSORIES

November 21, 1952
SEE IT...

PHOTOGRAPH IT...

without disturbing setup

Microscope and illuminator are properly aligned on sliding baseboard. Setup glides intact into position for visual or photomicrographic work. Heavy base, specifically designed to absorb vibration, helps maintain precise setup.

Enjoy speed, convenience and efficiency advantages of the world's finest photomicrographic equipment—in all these essential uses:

- Visual microscopy
- Photomicrography of transparent and opaque specimens
- Photomacrography of transparent and opaque specimens
- Photocopying

WRITE

for Catalog E-210 and for advice on your photomicrographic problem. Bausch & Lomb Optical Co., 642-33 St. Paul St., Rochester 2, N. Y.