



MODEL JM-2000

SINCLAIR-PHOENIX AEROSOL PHOTOMETER

for

- Measurement & Control in dust-free manufacturing "white rooms."
- Smog and Air Pollution Measurements in industrial areas.
- Medical Research—study of respiratory accumulation of dust and smoke particles.
- Evaluation of air filters, air conditioners and air-wash systems.

Featuring:

**Extreme Sensitivity
Wide Range
Portability
Control**

The Sinclair-Phoenix Model JM-2000 Aerosol Photometer is a complete self-contained instrument for measurement of the mass concentration of particulate matter in the atmosphere. The concentration at any instant is determined from the meter reading, or the instrument can be used with a recorder to obtain a continuous record of the variation in mass concentration during any given period.

PHOENIX PRECISION INSTRUMENT CO.

3805 N. 5th St.
PHILADELPHIA 40, PA.

INDEX OF ADVERTISERS—19 JANUARY 1962

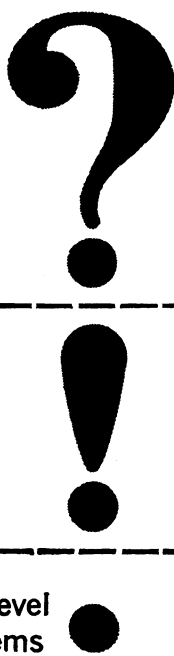
Academic Press	150	LaPine Scientific Co.	258
Ace Glass Inc.	243	Leitz, E., Inc.	172
Ainsworth, Wm., & Sons, Inc.	229	Linde Co.	259
Adjusto Equipment Co.	224	Lionel Electronic Laboratories	146
Alconox, Inc.	228	London Co.	166
American Edelstaal, Inc.	260		
American Electronic Laboratories, Inc.	248	Maryland Plastics, Inc.	145
American Optical Co.	270	Matheson Co., Inc.	231
Applied Physics Corp.	265	McGraw-Hill Book Co.	133
Applied Science Laboratories, Inc.	268	Mechanical Enterprises, Inc.	142
Asiatic Animal Imports, Inc.	268	Mettler Instrument Corp.	162
Atomic Accessories Inc.	129	Millipore Filter Corp.	260
		Minneapolis-Honeywell, Heiland Div.	135
Baird-Atomic, Inc.	139	Microchemical Specialties Co.	242
Baker, J. T., Chemical Co.	137	Mikros Inc.	222
Bellco Glass Inc.	224		
Bethlehem Apparatus Co., Inc.	230	Nalge Co., Inc.	257
Brinkmann Instruments, Inc.	168, 244	National Instrument Laboratories, Inc.	256
Buchler Instruments, Inc.	223	New Brunswick Scientific Co., Inc.	152
		Nikon, Inc.	149
Cambridge Instrument Co., Inc.	250	NRC Equipment Corp.	224, 251, 263
Castle, Wilmot, Co.	140	Nuclear Enterprises Ltd.	258
CBS Laboratories	231	Nutritional Biochemicals Corp.	123
Central Scientific Co.	241		
Charles River Mouse Farms	268	Ohaus Scale Corp.	238
Clay-Adams	163		
Coleman Instruments, Inc.	136, 143	Packard Instrument Co., Inc.	174
Coors Porcelain Co.	230	Parr Instrument Co.	237
Cryogenic Engineering Co.	248	Perkin-Elmer Corp.	124
Cuisenaire Co. of America, Inc.	268	Pfaltz & Bauer, Inc.	247
Custom Scientific Instruments, Inc.	264	Phoenix Precision Instrument Co.	224, 255, 266
		Photovolt Corp.	251
Davis, F. A., Co.	263	Picker X-Ray Corp.	151
Difco Laboratories	251	Pilot Chemicals, Inc.	256
		Pioneer Plastics	234
Eaton-Dikeman Co.	153	Porter-Mathews Co., Inc.	262
Edmund Scientific Co.	169	Presin Co.	256
Electronic Associates, Inc.	171	Princeton University Press	264
Elgeet Optical Co., Inc.	134		
Engis Equipment Co.	226	Randolph Co.	234
Equipto	253	Raytheon Co.	156
Erb & Gray Scientific, Inc.	148	Ridgefield Instrument Group	130
Fisher Scientific Co.	239	Sanborn Co.	141
F & M Scientific Corp.	221	Sargent, E. H., & Co.	165
Ford Kennel Equipment	268	Schwarz BioResearch, Inc.	232
		Scientific Glass Apparatus Co., Inc.	236
Garfield, Oliver, Co., Inc.	248	Servonuclear Corp.	246
Gelman Instrument Co.	155	Sharp Laboratories, Inc.	267
Glas-Col Apparatus Co.	161	Sherer-Gillett Co.	267
Graphic Systems	268	Sigma Chemical Co.	167
Grieve-Hendry Co.	246	Sorvall, Ivan, Inc.	164
		Standard Scientific Supply Corp.	240
Hacker, William J., & Co., Inc.	241	Stoelting, C. H., Co.	256
Hammer Electronics Co., Inc.	242	Stokes, F. J., Corp.	249
Harford Metal Products, Inc.	260		
Harvey-Wells Corp.	132	Technicon Chromatography Corp.	227
High Voltage Engineering	144	Thermolyne Corp.	222
Hitachi, Ltd.	128	TIAA	225
Hofman Laboratories, Inc.	252	Torsion Balance Co.	147
Honeywell	158	Tracerlab, Inc.	160
		Trinock, Inc.	255
Institute for Scientific Information Instrument and Development Product Co., Inc.	263		
Instrumentation Associates Inc.	227, 244	Unitron Instrument Co.	131
Instruments for Research and Industry	249	U.S. Stoneware	252
International Business Machines	122		
International Equipment Co.	126, 127	Vanguard Instrument Co.	154
Isomet Corp.	246	VirTis Co., Inc.	157
Keithley Instruments	228	Wild Heerbrugg Instruments, Inc.	235
Kensington Scientific Corp.	237	Wilkens Instrument & Research Inc.	268
Kewaunee Scientific Equipment	234	Will Corp.	261
Keystone Plastics Co.	237	Williams & Wilkins Co.	138
Kimble Glass Co.	269	Worthington Biochemical Corp.	254
Klett Manufacturing Co.	246		
		Zeiss, Carl, Inc.	159

who supplies more
transistorized
LOW LEVEL α and β
COUNTING SYSTEMS
than all other
manufacturers combined



Sharp can solve **your** low level
radioactivity counting problems

Box 1302, La Jolla, California
Phone GLencourt 9-3211



MANAGER OF COMMERCIAL DEVELOPMENT

Pharmaceutical Products

Administrative evaluation of pharmaceutical products as candidates for inclusion in product line. Collaborate with management group in decisions to market proposed products. Act as liaison in scientific and legal negotiations with inventors of new products or processes.

Candidates should have doctorate in biochemistry with approximately 7 years' industrial pharmaceutical experience in research or research administration.

Company is located in midwestern metropolitan area.

Send résumé in complete confidence, including salary requirements to, **R. F. Schopps**.

BAXTER LABORATORIES, INC.

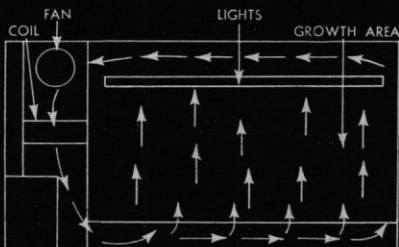
Morton Grove,

Illinois

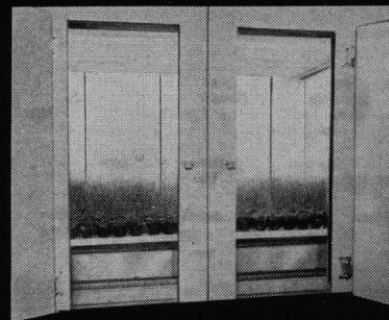
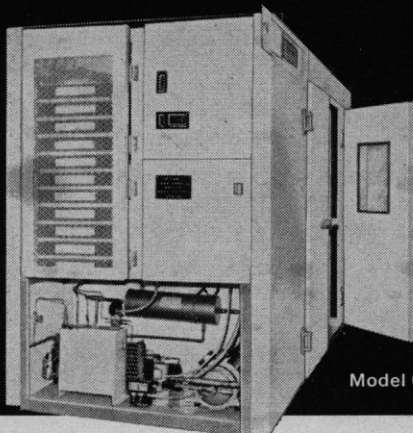
Equal Opportunity Employer

SHERER- GILLETT

PACKAGED GROWTH ROOMS



Re-circulating Air Principle Dissipates Excessive Heat From Lights By Moving It Up Through The Lamp Bank and Back Over Refrigerating Coils; Ends Need for Hard-to-Clean Barrier.



Model C E L 512-37 Approximate Size: 12'x5'x7½'

COMPLETELY PREFABRICATED • POWER AND CONTROL UNIT SECTION ALL PREWIRED • ONLY ONE ELECTRICAL CONNECTION TO MAKE—NO BARRIER UNDER LAMPS • UNIFORM AIR FLOW • NO LAMP HEAT IN CHAMBER • FULL LIGHT INTENSITY • CONSTANT TEMPERATURES • NO TEMPERATURE STRATIFICATION • STANDARD COMPONENTS FOR EASY SERVICE • TROUBLE-FREE PERFORMANCE THROUGH VIRTUAL ELIMINATION OF BREAKDOWNS • ONE DAY INSTALLATION. Write, wire or phone for brochure covering details and other important features.

SHERER-GILLETT CO.

MARSHALL, MICH.

Quality Products for Over 100 Years

SHERER-GILLETT COMPANY, DEPT. CEL, MARSHALL 3, MICHIGAN

- ☐ Please send me your detailed brochure and specification sheet on your Packaged Growth Room.
- ☐ Please have a salesman call on me to discuss in detail performance characteristics related to my experimentation.

Name and Title _____

Address _____

City, State _____

Field of Research _____

Personnel Placement

CLASSIFIED: Positions Wanted 25¢ per word, minimum charge \$4. Use of Box Number counts as 10 additional words. Payment in advance is required.

COPY for ads must reach SCIENCE 2 weeks before issue date (Friday of every week).

DISPLAY: Positions Open. Rates listed below—no charge for Box Number. Rates net. No agency commission allowed for ads under 4 inches. No cash discount. Minimum ad: 1 inch. Ads over 1 inch will be billed to the nearest quarter inch. Frequency rate will apply to only repeat of same ad. No copy changes. Payment in advance is required except where satisfactory credit has been established.

Single insertion \$50.00 per inch
4 times in 1 year 48.00 per inch

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

Replies to blind ads should be addressed as follows:

Box (give number)
Science
1515 Massachusetts Ave., NW
Washington 5, D.C.

POSITIONS WANTED

Biology Teacher, experienced. Desires position in East. Box 8, SCIENCE. X

Plant Physiology Ph.D., 6 years of university teaching, publications. Box 7, SCIENCE. X

Virologist, Experienced, academic research, industrial research-development. Desires new opportunity. Box 1, SCIENCE. 1/12, 19

POSITIONS OPEN

CLINICAL BIOCHEMIST

Your opportunity for an excellent career. Entails research in application of methods to automation. Exceptional benefits such as profit sharing and retirement fund. Inquiry will be held in confidence. Send résumé to: Technicon Instruments Corporation, Chauncey, New York.

Pharmacologists (two Ph.D.'s). Small, independent dynamic company located in suburban Washington, D.C., area near excellent libraries, top government agencies. Projects include such exciting areas of research as space toxicology, primate behavioral studies, primate breeding programs. Latest equipment including Sanborn, Auto-analyzer, Electron Microscope, U.V.-IR-Visible Recording Spectrophotometers. Opportunity for scientific meeting attendance and publications. Associate with stimulating professional group. Liberal employee benefit program including profit sharing. For further information call collect or write K. T. Paynter, Personnel Manager, Hazleton Laboratories, Inc., P.O. Box 30, Falls Church, Virginia (JE 2-5800). X

(a) **Teachers**, B.S., M.S. secondary level, \$5000 up; West. (b) **Histology Assistant**, B.S., M.S.; work toward Ph.D. in basic medical science; East. (c) **Research Assistant**, work with animals in industrial medical research; Midwest. (d) **B.S./M.S. Chemist**, research and clinical; large midwestern hospital. (e) **Teachers**, M.S., biological/health sciences; eastern college. (f) **Bacteriologist**, B.S./M.S. for biological development laboratory; \$6000-\$7000; West. (g) **Faculty Appointments**: Chemistry, Biology/Microbiology, Ph.D., M.S., \$5000-\$7700; midwestern teachers college. (h) **Biochemist**, B.S./M.S., metabolism research; midwestern university. (i) **Clinical Bacteriologist**, M.S., experienced; \$8000-\$9600; midwestern hospital. (j) **Chemist**, routine analytical chemistries; midwestern serum and blood center; \$7200. (k) **Virologist**, M.S. experienced in tissue culture, quantitative viral techniques; midwestern research center. (l) **Isotope Technician**, CNS research; midwestern university; \$4000-\$10,000. Many other opportunities available for both Junior and Senior Scientists. Please write Science Division, THE MEDICAL BUREAU, INC., Burnelce Larson, Chairman, 900 North Michigan Avenue, Chicago 11, Illinois.

POSITIONS OPEN

Head of Pharmacology Department

Rapidly expanding, research-based ethical pharmaceutical company located in the San Fernando Valley section of Los Angeles has an unusual opportunity for a Ph.D. or M.D. scientist trained in pharmacology, physiology, or medicine. This position requires the ability to supervise a high caliber staff of over 30 people in all phases of pharmacological research and screening including toxicology. Present head has been promoted. Only individuals desiring an opportunity to join a rapidly advancing team operation should apply. Salary commensurate with experience. Excellent benefit program plus profit sharing. Live among orange groves near your work in the beautiful residential areas adjacent to our new plant.

Pharmaceutical Chemist

An opening also exists in the Product Development Department at the senior level for a young, bright, creative pharmaceutical chemist. This job has a future.

CONTACT:

Personnel Manager
Riker Laboratories, Inc.
Northridge, California

FELLOWSHIPS

PREDOCTORAL ASSISTANTSHIPS AND FELLOWSHIPS IN PHYSIOLOGY

Excellent opportunities for graduate students leading to the Ph.D. or M.S. Ample stipends and free tuition. Training and research in many areas of physiology. Write for details to Head, Department of Physiology,

University of Illinois College of Medicine
Chicago 12, Illinois

Research Assistantships in Anatomy, Biochemistry, Microbiology, or Physiology Leading to M.S. and Ph.D. Degrees:

FIELDS OF RESEARCH ACTIVITY include experimental embryology, teratology, electron microscopy, venom toxicology, neuroanatomy, neurophysiology, endocrinology, respiration, hemodynamics, immunology, virology, parasitology, bacterial physiology, protein structure and metabolism, nucleic acids, lipids, vitamin synthesis, enzyme mechanisms, biophysical chemistry. **LIBERAL STIPENDS** (\$255 a month), tuition reduction; high faculty-graduate student ratio; modern new air-conditioned medical school with excellent research facilities; new graduate student housing; pleasant Florida climate.

ADMISSION REQUIREMENTS: Bachelor's degree with high academic achievement, and Graduate Record Examination scores.

For detailed information, write to the chairman of the department of your major interest, UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, GAINESVILLE, FLORIDA.

The Market Place

BOOKS AND MAGAZINES

PARENTS AND TEACHERS:

With Cuisenaire® rods children enjoy learning mathematics.

For information write:

CUISENAIRE CO. OF AMERICA, INC.
Dept. S, 235 East 50 St., N.Y. 22, N.Y.

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, CANNERS, Inc. Boston 20, Massachusetts

FOR UP-TO-DATE INFORMATION ON

GAS CHROMATOGRAPHY

READ AEROGRAH RESEARCH NOTES

write for your free subscription

WILKENS INSTRUMENT & RESEARCH INC.
Box 313-A • Walnut Creek, Calif.

SUPPLIES AND EQUIPMENT

YOU NEED THIS FREE

1962 CATALOG

Serums, antisera and bloods of all kinds for technicians and tissue culture laboratories. No salesman will call.

COLORADO SERUM CO.

4950 York St. • MAIN 3-5373 • Denver 16, Colo.

• HYPOPHYSECTOMIZED RATS

Shipped to all points via Air Express

For further information write

HORMONE ASSAY LABORATORIES, Inc.

8169 South Spaulding Ave., Chicago 29, Ill.

GAS CHROMATOGRAPHY Supplies

and FATTY ACID STANDARDS

APPLIED SCIENCE LABORATORIES, INC.

Dept. S, Box 140

State College, Penna.

CAGES

Dog and Primate

Send for

FREE CATALOGUE

Ford Kennel Equipment

6544 E. Westfield Blvd.

Indianapolis 20,

Indiana

— PRIMATES —

Rhesus — Cynomolgus — Nemestrina

Research Grade — T.B. Tested

Stabilized and Guaranteed

ASIATIC ANIMAL IMPORTS, INC.

Research Primate Division

P.O. Box 8125

San Francisco 28

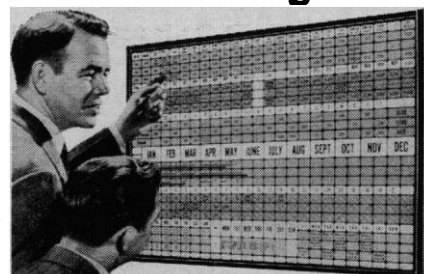
International airport

YUkon 2-6666

San Francisco 28

Oxford 7-3747

How To Get Things Done



BOARDMASTER VISUAL CONTROL

Your operations are pictured at a glance. You save time, money and prevent mixups by Seeing What is Happening at all times. Ideal for Production, Maintenance, Inventory, Scheduling, Sales, Etc. Easy to Use. You write on cards, snap on metal board. Over 750,000 In Use.

FREE 24-Page BOOKLET No. BF-50 Mailed Without Obligation

GRAPHIC SYSTEMS

925 Danville Road • Yanceyville, N.C.

CHARLES RIVER *CD-1

(Caesarean-derived)

Mice ALBINO SWISS ICR

Hypophysectomies available

THE CHARLES RIVER MOUSE FARMS

1018 Beacon St., Brookline 46, Mass., RE 4-2000



New KIMAX beakers feature improved pour-outs and marking areas.

A BONANZA of KIMAX Beakers

✱ Kimble presents new, complete lines of KIMAX hard-glass beakers from 1 ml to 4000 ml

Full lines of KIMAX® beakers are highlighted in the new **Kimble** catalog. Styles include low-form, high-form, conical, and Raysorb low actinic beakers.

You'll find new utility in KIMAX beakers. Like special pour-outs that minimize dripping. And enameled marking areas for clean penciling, easy erasure.

KIMAX beakers are long-lived, thanks to improved design features. Like extra-heavy beaded rims. Hard glass construction. Uniform glass distribution through sidewalls, radii and bottoms.

Add KIMAX beakers—any style, any size—to orders for other Kimble glassware. Lab supply dealers in most states offer 28% discount on orders of 150 cases or more.



This catalog should be on the shelf of every progressive laboratory. If you do not have one—**mail the coupon today**

Kimble Glass Company, Subsidiary of Owens-Illinois
Dept. SC-1, Toledo 1, Ohio

Please send me the new Kimble catalog which includes the expanded KIMAX glassware line.

Name _____

Firm _____

Address _____

Position _____

✱ EVERY DAY SEES SOMETHING NEW AT KIMBLE

KIMBLE LABORATORY GLASSWARE
AN **①** PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO



FIVE REASONS WHY THE AO SPENCER MICROSTAR IS YOUR BEST MICROSCOPE BUY!

1 Time-tested . . . Performance-proved: More AO Spencer Microstars have been sold in the five years since its introduction than any other laboratory-medical microscope over a similar length of time. This all-time favorite is still your best buy today, offering you mechanical and optical superiority proved in actual performance.

2 Sure-fire Photomicrography: Photomicrographic bodies with coupled visual and photographic systems let you shoot what you see . . . quickly and effortlessly. There's no guesswork, no hit-and-miss attempts to expose properly to a variable magnification system . . . no time or film wasted. You always know the resultant magnification, field size and ultimate film magnification.

3 Built-in Illuminator with Field Diaphragm: Microstar's Built-in Base Illuminator has a field diaphragm. You can control the light to illuminate only the area being photographed . . . eliminating

extraneous light and glare. You use *all* the numerical aperture provided by each objective, get maximum resolution and definition.

4 Both Right and Left-hand Mechanical Stages: Microstar Bodies are rotatable . . . so AO gives you a choice of both right and left-hand stages. No matter how you prefer to use the microscope, orthodox or reverse positions, you can order a mechanical stage with controls located either to your right or left hand.

5 Building-block Concept of Design: Microstar's building-block concept of design permits over 600 possible combinations or models to choose from . . . you select a Microstar that exactly suits your requirements. Complete interchangeability of bodies, nosepieces, stages and bases means you can add accessories or parts as your requirements change.

Write now for 24-page brochure giving complete information about the AO Spencer Microstar Series.

American  Optical
COMPANY

INSTRUMENT DIVISION, BUFFALO 15, NEW YORK

IN CANADA write — American Optical Company Canada Ltd., Box 40, Terminal A, Toronto, Ontario.

Dept. A-3

Gentlemen: Please send 24-page Microstar brochure, SB124.

Name

Address

City Zone State