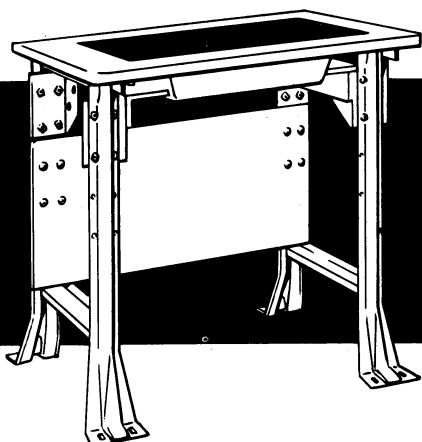


NO MORE VIBRATIONS



**TEST
TRY
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THE NEW BRINKMANN-SARTORIUS BALANCE TABLE

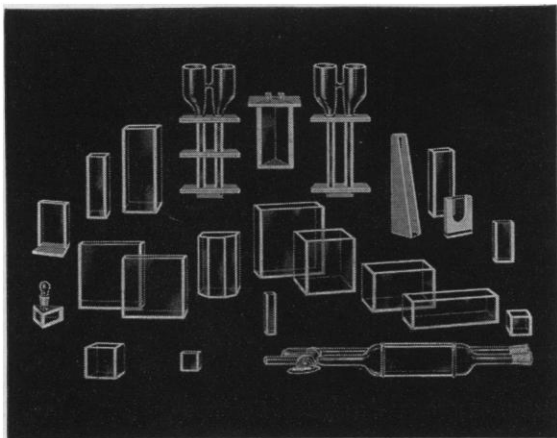
Your vibration troubles with analytical and micro balances are over — or greatly reduced with the Brinkmann-Sartorius Anti-Vibration Balance Tables or Wall Brackets.

- ★ EASILY INSTALLED ★ REASONABLY PRICED
- ★ SINGLE AND MULTIPLE UNITS

Your local laboratory supply house will arrange for free trial delivery or write:

Brinkmann Instruments, Inc., Cutter Mill Road, Great Neck, L. I., N. Y.

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Makers of Complete Electrophoresis Apparatus

— SCIENTIFIC APPARATUS —

Klett-Summerson Photoelectric Colorimeters—
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Electron Micrograph with the Hitachi HU-10



spheroidal graphite in
cast iron, taken (by rep-
lica) at 18,000x

The ease with which the Hitachi Electron Microscope can be focused, even at extremely high magnification, insures a high percentage of successful micrographs.

The Hitachi HU-10 Electron Microscope has continuous magnification from 400x to 100,000x, and its high resolving power of 10 Angstrom units allows photographic enlargements up to 1,000,000x!

For further information, contact

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NEW

AINSWORTH

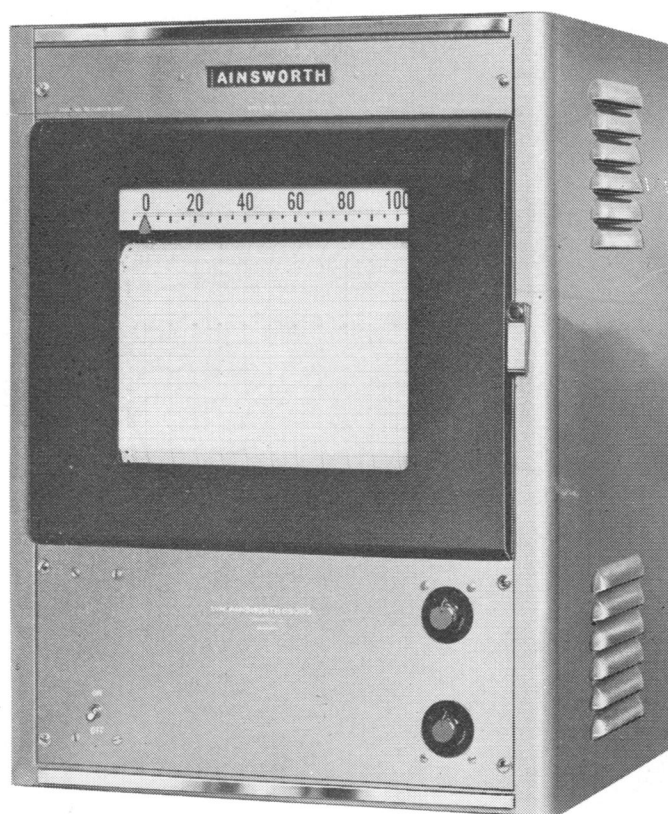
Automatic Recording Analytical Balance

Opens New Fields of Research and Control...

- ***thermogravimetric analysis***

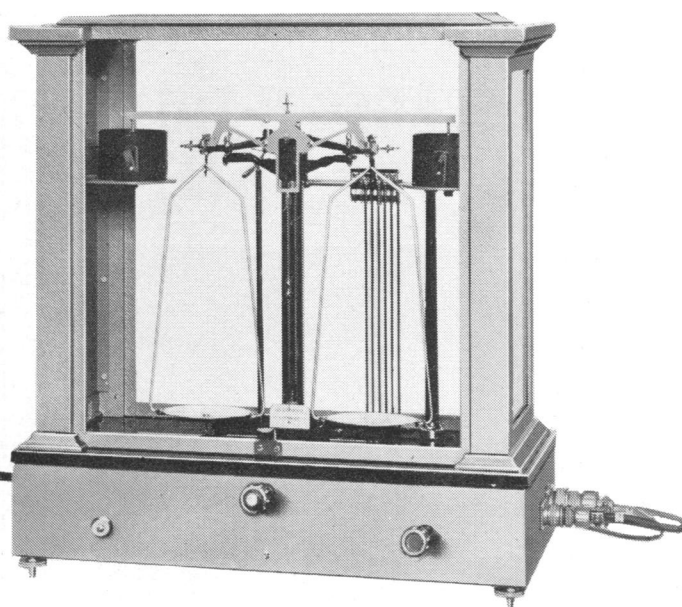
- ***investigation of***

EVAPORATION, ABSORPTION, CORROSION, OXIDATION, DECOMPOSITION... and other reactions in which weight-vs-time or weight-vs-temperature (or other factor) is significant.



Ainsworth Type AU-I Recorder

The recorder is operated by a balanced bridge, so the reproducibility of the recording balance is not affected by variations in line voltage, tube characteristics, temperature, air pressure, or length of run, nor by

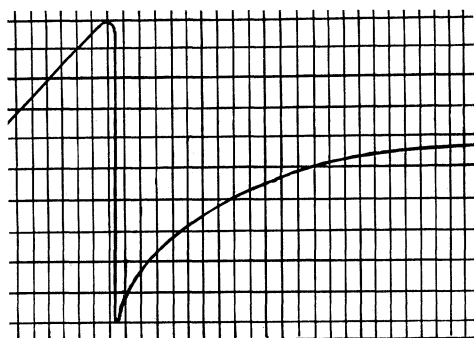


Ainsworth Type BR Analytical Balance

nearby magnetic fields or materials, or residual magnetism in the system. The recorder is "standardized" continuously without batteries, and no recalibration is required when tubes are replaced.

WM. AINSWORTH & SONS, INC.
2151 LAWRENCE STREET • DENVER 5, COLORADO

**WRITE FOR
BULLETIN 158**



AINSWORTH RECORD-A-WEIGH

**Shows
Instantaneous
Weight and Rate
of Change**

This new laboratory instrument combines the range and accuracy of the Ainsworth Analytical Balance with a continuous record and automatic operation.

Records weight changes for long or short periods on a chart 11" wide representing 110 mg. Accuracy and readability are plus or minus 1/10 mg. Capacity 200 grams.

Automatically adds or subtracts weights as required to rescale recorder pen. Range of automatically controlled weights is 4 grams. This is 40 chart widths—and the recording is linear all the way.

Samples can be placed on the balance pan or suspended in a controlled environment, above or below the balance.

Research and development

*of new instruments like this,
are made possible by
your purchase of products*

"MADE IN U.S.A."

WM. AINSWORTH & SONS, INC.

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 1134.

■ **PHASE METER**, for measuring the angle between two periodic potentials of any shape, consists of two clipping circuits, one for each channel, a rectifier, and a panel meter. Input can be from 90 to 130 v r.m.s. per phase. Phase ranges are 0 to 36, 0 to 90, and 0 to 180 deg. Accuracy is ± 3.5 percent of full scale. Operating frequency range is 20 to 1000 cy/sec. Impedance is 5500 ohm. (Advance Electronics Laboratory, Dept. 27)

■ **BIOCHEMICALS**, more than 2100 in number, are listed with prices in a 1958 catalog. Many new listings are included. (Nutritional Biochemicals Corp., Dept. 29)

■ **NOISE TUBE**, type TD-22, is designed for use as a noise source in super-high-frequency measurements. It is constructed for use in Rg/48U waveguide to provide noise in the 7.6- to 11.5-cm band (Bendix Aviation Corp., Dept. 30)

■ **MICRO-DISTRIBUTION SAMPLER** assists the microscopist in volumetric analysis of microscopic specimens. The instrument includes an electrically operated mechanical stage which scans the specimen in discrete predetermined steps. The operator identifies the constituent under the cross-lines and presses one of either 7 or 14 keys which record and count the occurrences of constituents at the sample points. The result is a recorded distribution of up to 14 constituents in the sampling grid pattern. (Hilger and Watts, Dept. 31)

■ **FREQUENCY AND PULSE-RATE TRANSDUCER** uses only static elements to produce a d-c output current or voltage proportional to the input frequency. Output accuracy and linearity are maintained within $\pm 1/2$ percent of full scale over a temperature range from -60° to $+100^\circ\text{C}$. Output full-scale range is 0 to 5 v. Maximum frequency can be adjusted through a 4-to-1 range. Four standard models cover the range to 4000 cy/sec. (Pioneer Magnetics Inc., Dept. 36)

■ **SPECTRUM ANALYZER** covers the range from 10 to 21,000 Mcy/sec. The instrument is shielded to permit operation in fields exceeding 4 Mw without spurious response. The instrument will withstand vibration of 10 g, 10 to 55 cy/sec, and, in its transit case, shock of 37 g and 10 msec duration. (Lavoie Laboratories Inc., Dept. 44)

■ **DIGITAL-TO-VOLTAGE CONVERTER** operates at a rate of more than 500,000 conversions per second. The instrument generates a voltage that is the product of an input number and a fixed or varying reference voltage. The device has no moving parts. Accuracy of 0.01 percent is available. Accuracy may be exchanged for speed to obtain conversion speeds up to 0.5 μsec . (Packard-Bell Computer Corp., Dept. 38)

■ **CHROMATOGRAM SCANNER** counts and records automatically the radioactivity distributed on a strip chromatogram. The instrument comprises a strip feeder, a choice of window or windowless radiation detectors mounted in a lead shield, a count-rate meter, and a chart recorder. The instrument is equipped with a supply reel and a take-up reel accommodating as much as 50 ft of strip filter paper. Width is adjustable between $1/2$ and $1 1/2$ in. When the end of the strip is reached, the instrument is turned off automatically. Scanning speeds range from $3/4$ in./hr to 12 in./min. (Nuclear Chicago Corp. Dept. 40)

■ **HIGH-VACUUM PUMPING STATION** provides high-speed pump-down and ultimate vacuum of less than 10^{-8} mm-Hg. The cold trap operates from 8 to 10 hr on one filling. The ion gage used for vacuum indication to 2×10^{-9} mm-Hg is of non-burnout design. Drift is less than 2 percent per day. The Chemstone top of the equipment can be used as a work table. (Veeco Vacuum Corp., Dept. 37)

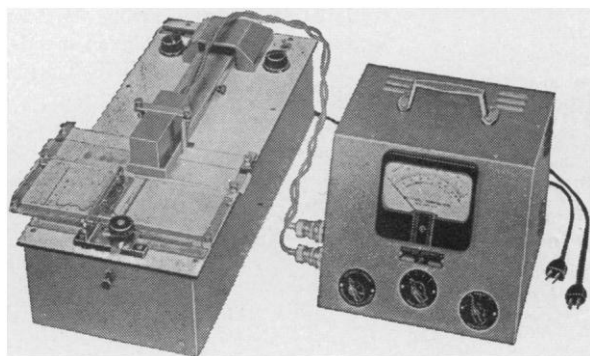
■ **ENVIRONMENTAL CHAMBER** of 16-ft³ capacity offers a temperature range from ambient to -130°F . The chamber is designed to be explosion-proof, air circulation is accomplished by an externally mounted explosion-proof motor. Thermal capacity is 5800 Btu/hr at -100°F . Interior is made of 14-gage stainless steel. Access is at top through a counter-balanced lid. (Webber Corporation, Dept. 48)

■ **POINT LIGHT SOURCE** is a compact optical system which concentrates the light output of a high-pressure mercury lamp into a small-diameter point of high intensity. Source diameters range from 0.002 to 0.16 in. with corresponding intensities ranging from 3 to 300 ca. Beam width is a full 180-deg hemisphere. The 100-w mercury lamp is housed in a metal case. The optical system comprises a condenser lens, objective lens, demagnifier and dispersal lens, and appropriate apertures and filters. Adjustable lenses may be provided to produce varied point characteristics within limits. Small fans cool the lenses. (De Florey Co., Dept. 43)

JOSHUA STERN
National Bureau of Standards

PHOTOVOLT Densitometer

for Partition Chromatography
and Paper Electrophoresis



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

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- OVER 200 NUCLEOPROTEINS, PURINES, PYRIMIDINES
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New Catalog
Feb. 1958
Over 2100 Items
Write Dept. 102

PERSONNEL PLACEMENT

CLASSIFIED: 25¢ per word, minimum charge \$4.25. Use of Box Number counts as 10 additional words. Payment in advance is required.

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

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Single insertion	\$26.00 per inch
13 times in 1 year	24.00 per inch
26 times in 1 year	23.00 per inch
52 times in 1 year	22.00 per inch

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Replies to blind ads should be addressed as follows:

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

POSITIONS WANTED

Biochemistry Technician able to set up routine clinical biochemistry laboratory. Box 117, SCIENCE. 5/9, 16

Biologist, M.S. plus. University, government, UN, tropical experience. Teaching, administration. Equipped biology, general zoology, invertebrate, entomology, ecology. Writing ability. Seeks college, science association, and so forth. Available. Box 127, SCIENCE. X

Biophysicist, experienced in broad field of experimental and theoretical biophysics, radiation biology, advanced instrumental techniques. Desires academic or institutional position. Box 128, SCIENCE. X

POSITIONS WANTED

Immunochemist; Ph.D., 1951. Experienced physical chemistry of antibodies, enzymes, and radiochemistry. Honor societies, numerous publications, good references. Research or academic. East or Midwest. Box 124, SCIENCE. X

Ph.D., bacteriology; 5 years' experience also in cellular physiology, radioisotopes, biochemistry. Research or industrial position. Box 125, SCIENCE. 5/16, 23

Ph.D., zoology. 36. Able, stimulating teacher; productive researcher. Special interests: invertebrate zoology, microbiology, entomology, ecology. Box 120, SCIENCE. X

Physician, veterinarian, extensive experience in bacteriology, virology, tissue cultures, laboratory animals. Desires position in public health, university, or industry. Box 126, SCIENCE. X

Science Writer-Interpreter seeks new challenge. Ph.D. behavioral and life sciences. Author, documentalist, linguist. Will write surveys, memoranda, résumés; design science exhibits. Box 104, SCIENCE. 5/9

POSITIONS OPEN

ADMINISTRATOR-RESEARCH PROJECTS to organize and coordinate scientific project teams investigating and developing new compounds for therapeutic use. Research and development division of pharmaceutical manufacturer desires college graduate with business school training or administrative experience. Some science background helpful but not essential. Comprehensive company benefits. Philadelphia location. Send complete history of education and experience and indicate salary requirement. Box 129, SCIENCE. X

Zoologist, Ph.D. Liberal arts college seeks department head, \$5480-\$5960 for 10½ months. Annual raises. Union College, Barbourville, Kentucky. 5/9

POSITIONS OPEN

CLINICAL INVESTIGATION

Large midwest ethical pharmaceutical company has opportunity for physician; prefer man 30 to 40 with some experience past internship; experience in nutrition and metabolism desirable.

SCIENTIFIC WRITER

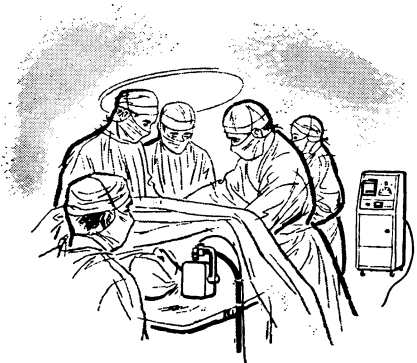
Young physician interested in medical writing. Work involves interpretation of laboratory and clinical data on new drugs for practicing physicians and scientific publications.

Please send complete résumé to
Technical Employment Coordinator
THE UPJOHN COMPANY
Kalamazoo, Michigan

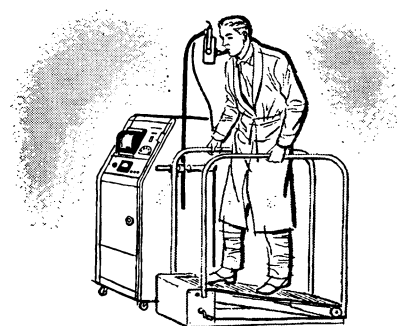
(a) Pharmaceutical Chemist; prefer with cosmetic or skin preparation experience; direct new midwestern laboratory operated by important eastern industrial concern; promotional and development work in dermatological products; salary commensurate with qualifications. (b) Bacteriologist; M.S. for clinical duties, 300-bed general hospital; to \$6000; college city 75,000; Midwest. (c) Research Chemist; special interests in hormones, human reproduction, prefer experienced histochemistry, paper chromatography, electronic instruments; department of obstetrics-gynecology, midwestern university medical school; to \$7000. (d) Junior Bacteriologist; B.S. for microbiology division, eastern concern; duties in chemotherapy, small animal laboratories; \$4800. Woodward Medical Bureau, Ann Woodward, Director, 185 North Wabash, Chicago. X

Two New Instruments

FOR FAST, ACCURATE CO₂ MONITORING



During anesthesia, detector arm can be clamped directly to operating table and console used remotely. Detector is pressurized for safety in an explosive atmosphere.



In physiological testing, detector arm attaches to console and can be adjusted to reach subject on a treadmill or in any position required for pulmonary investigations.

The CO₂ content of respired air can be determined instantly with the new Beckman/Spingo medical gas analyzers. Designed especially for monitoring patients under anesthesia and for diagnosing lung and cardio-pulmonary disorders, these instruments measure rapidly, specifically and continuously.

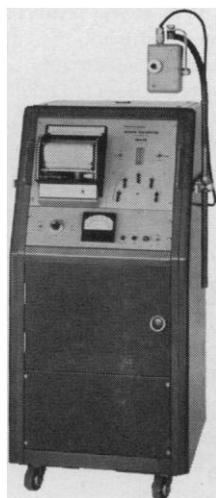
Both new instruments are engineered for safety in the operating room and for flexibility in testing and research. Besides CO₂, other gases of medical interest, such as Fluothane, cyclopropane, nitrous oxide and ether, can be measured by changing detectors.

The Model LB-2 Medical Gas Monitor is a complete, mobile console which can be used remotely during anesthesia. In physiological testing, the LB-2's detector arm adjusts to reach a subject in any position. If a record of CO₂ levels is desired, the console contains a recorder capable of following respiratory rates up to 70 per minute.

A companion model, the LB-1 Medical Gas Analyzer, consists of an amplifier and detector. It serves as a basic system to which other equipment can be added as needed. Like Model LB-2, it has a response time of 0.05 second with an accuracy of 0.1% CO₂.

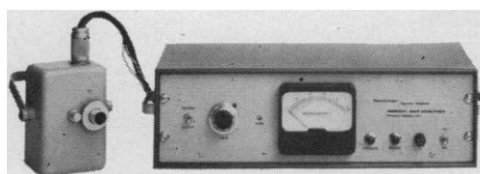
Both models are supplied with two types of sampling cells for monitoring either the entire tidal volume or merely a portion of it.

Models LB-1 and LB-2 are redesigned and improved versions of the Liston-Becker Model 16 CO₂ Analyzer which has been used extensively in polio clinics and pulmonary research. Because of their design advances, the new models can now be used wherever CO₂ analysis is essential. We'll be happy to send you detailed information — write Spingo Division, Beckman Instruments, Inc., Stanford Industrial Park, Palo Alto, California. Ask for File LB-5E.

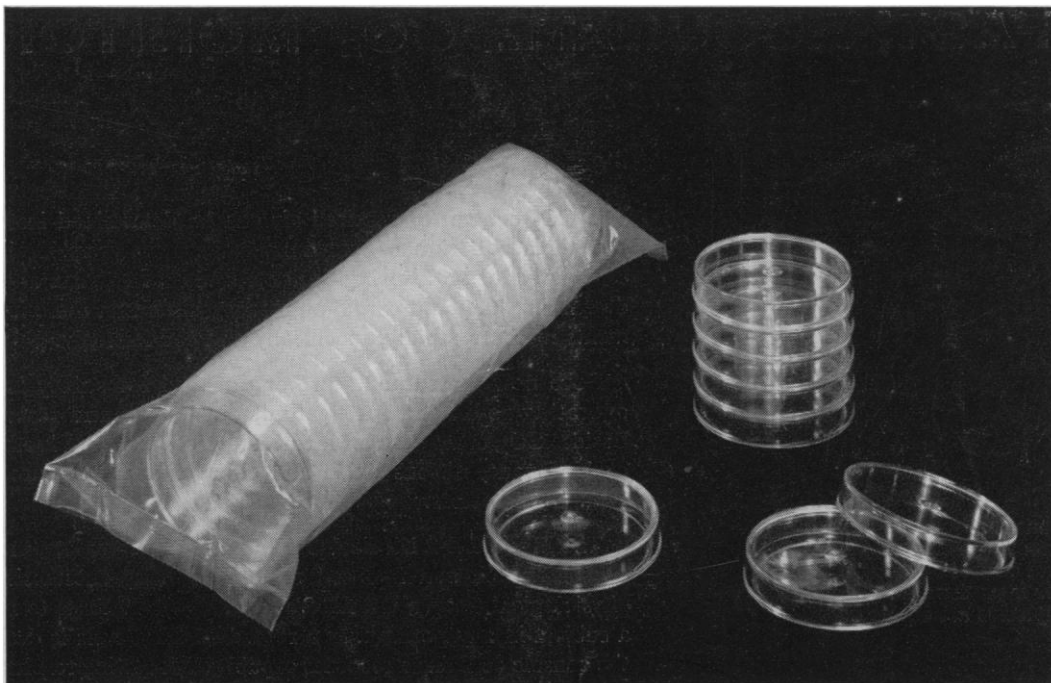


LB-2 Monitor

Beckman® / **Spingo Division**
Beckman Instruments, Inc.



LB-1 Analyzer



New

DISPOSABLE PLASTIC PETRI DISH

... sterilized, ready for one-time use, saving time and labor

Wheaton plastic Petri Dishes are made of lightweight, transparent, colorless polystyrene, which can be marked with glass marking pencil, is inert to usual bacteriological reagents and media, and contains no plasticizers. Used successfully with a wide variety of cultures without apparent inhibiting effect. Heat distortion temperature is approximately 84°C. Rims on both top and bottom parts facilitate stacking; three peripheral lugs on the bottom rim separate stacked dishes to allow free circulation of air in the incubator.

Sterilization has been effected by means of

a germicidal mixture of ethylene oxide and carbon dioxide. Dishes from each lot are tested for sterility in accordance with the procedure specified by the U. S. Pharmacopoeia.

Nominal size is 100 x 15 mm, with bottom approximately 95 mm outside diameter x 14 mm deep, and loosely fitting top, 100 mm outside diameter x 13 mm deep; overall assembled height, 19 mm.

Plastic dishes eliminate the hazards and costly, time-consuming operations of cleaning and sterilizing associated with glassware, and can be destroyed by incineration.

4338-A. Culture Dish (Petri Dish), Disposable, Polystyrene, Wheaton, as above described, nominal size 100 x 15 mm. Sold only in sealed, reinforced polyethylene bags containing 20 sterilized pairs.

Per 20 pairs, in sealed bag.....	3.00	Per case, in lots of 12 cases (6000).....	50.72
Per carton containing 120 pairs (6 bags of 20)	14.40	Per case, in lots of 30 cases (15,000)*.....	49.29
Per carton, in lots of 25 cartons (3000) or more	13.37	Net weight, per pair.....	7/8 oz.
Per case containing 500 pairs (25 bags of 20)	57.15	Shipping weight per carton of 120.....	8 1/2 lbs.
Per case, in lots of 6 cases (3000).....	52.86	Shipping weight per case of 500.....	33 lbs.

*In lots of at least 250 cases of 500 each (125,000 or more), price is \$48.57 per case. Such quantities are shipped directly from factory and delivered at convenience of purchaser provided shipment of 250 cases is accepted within one year from date of order.



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