

TECH NEWS

for Scientists, Mathematicians Operations Evaluation Group

May 1962 is "Operations Research Month"—in fact, if not by official proclamation. In Washington, D.C., the 10th anniversary meeting of the Operations Research Society of America (ORSA) on May 9-11 and the OEG 20th Anniversary Conference on Operations Research on May 14-16 will take place. The latter event is of special import to the Operations Evaluation Group because, as the oldest continuing military operations research organization in the nation, the group began its own career 20 years ago—May 1942.

**20TH
YEAR
OEG**

The 20th Conference will be of international scope. The three-day session will explore the first 20 years of operations research in the United States, survey the state of the science here and abroad and discuss the future of OR in terms of the lessons of yesterday and today.

The conference will cover a wide spectrum of topics on operations research—from applications in public health to high-speed computers . . . from new tools for industrial use to fiscal planning for the Department of Defense.

OEG acts as civilian scientific advisor to the Chief of Naval Operations and the Commandant, U.S. Marine Corps. OEG's analysts function in problem areas which include strategic planning, amphibious operations, air warfare, submarine and antisubmarine warfare, and logistics.

This is complex and essential work. It requires scientists, preferably with advanced degrees who can combine analytical talent with a certain amount of enterprise. If you are a mathematician, physicist, engineer or economist who wants to participate in a significant research program, please send your resume to the Director, Dr. Jacinto Steinhardt.

OEG
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Personnel Placement

POSITIONS WANTED

(a) **Ph.D. Pharmacologist/Physiologist** interested in teaching either; research. (b) **M.S. Animal Husbandry** (dairy chemistry) wants management/care pharmaceutical animal laboratory. (Please write for information regarding these and other scientists, senior and junior, in all fields; nationwide and very active service.) Science Division, **The Medical Bureau, Inc.**, Burneice Larson, Chairman, 900 N. Michigan Avenue, Chicago 11, Illinois. X

POSITIONS OPEN

(a) **Bacteriologist**; Ph.D. hd rec expanded dept aver 750 proc/mo; very well-equipped labs, incl virol lab; pref w/known virus techs also; excel oppty also do rsrch, teach techs, interns, resid, in addn clin bact, possible faculty appt; very lge gen hsp; to \$13,000; SW. (b) **Biochemist**; Ph.D. exp'd lipid chem, rsrch found, lge W. Coast clinic; \$10,000. (c) **Bacteriologist**; hd dept, 150-bd gen hsp, lge affil clin grp; MW. (d) **Biochemist**; M.S. to hd dept, 250-bd vol gen hsp; \$7500 up; NYC vic. (e) **Pharmacologist**; rec Ph.D. to do rsrch mechanisms of action studies, anticancer drugs; to \$8400; W. Science Division, **Woodward Medical Personnel Bureau**, Ann Woodward, Director, 185 North Wabash, Chicago. X

CHEMIST BIOCHEMIST

For basic science research lab in large NYC hospital and research center. Must have B.S. in biochemistry plus considerable lab experience or post-graduate degree in biochemistry. Will engage in research in connective tissue biochemistry. Challenging oppty in professional atmosphere. Salary open depending on experience and qualifications. Many employment benefits. Send curriculum vitae of education, experience and minimum starting salary requirements to: Box HA-7355, 250 W. 57 St, NY 19

FACULTY APPOINTMENTS: (a) **Organic Chemistry**, Ph.D., north central liberal arts college; to \$9000. (b) **Biology**, Ph.D./M.S., small eastern college; to \$8000. (c) **Invertebrate Zoology** (bacteriology/biophysics), Ph.D., north central college; to \$9000. (d) **Analytical Chemistry** (inorganic-radiochemistry), Ph.D., central state college; to \$9000. (e) **Bacteriology/Parasitology** research associate, central university; to \$8000. Many other opportunities available for both junior and senior scientists. Please write Science Division, **The Medical Bureau, Inc.**, Burneice Larson, Chairman, 900 North Michigan Avenue, Chicago 11, Illinois. X

MEDICAL DIRECTOR

for manufacturer of mass-dosage parenteral fluids and associated hospital products located in residential Glendale, California, just minutes via freeway from Los Angeles. Position offers unique opportunities for science-oriented M.D. capable of directing clinical research program. Must be able to deal with other physicians in testing efficacy of new products. Prefer capable speaker and writer with experience in the pharmaceutical industry. Competence in the field of fluid and electrolyte therapy and a record of published results of original research highly desirable. Company offers liberal benefits including company-paid retirement plan. Salary open. Please send resumé to Director of Employee Relations.

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PHYSICAL BIOCHEMIST

An opening exists for a recent or prospective Ph.D. to collaborate in physico-chemical studies of heme proteins. Availability no later than July is required. Excellent salary with appointment renewable for several years.

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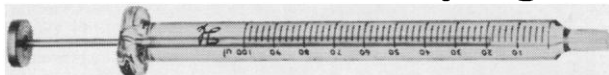
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MEDICAL RESEARCH

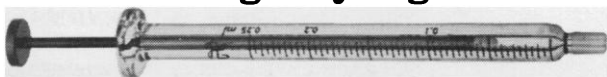
CHEMICAL RESEARCH

Hamilton Microliter Syringes*



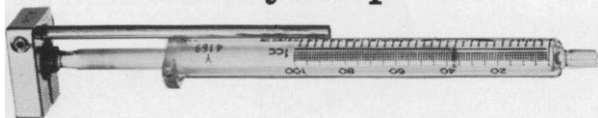
Accurate liquid discharges may be made in the range of 500 ul to 0.02 ul by direct reading of the Hamilton Microliter Syringe scale. These instruments have proven very valuable as research and analysis tools in chromatography, chemistry, biology, and medicine. Hamilton Microliter Syringes are made of precision bore NC glass, are individually fitted with stainless steel plungers, and are not interchangeable. The clean, unlubricated syringe is leak tight when tested with water at 150 psi. Subdivision of calibration is with precision of graduation better than 2%. Six syringe models, from a 1.0 ul capacity to a 500.0 ul capacity. *Patent Number 2933087.

Gas-Tight Syringes*



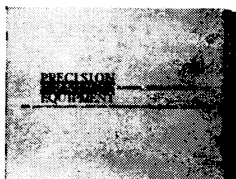
Hamilton Gas-Tight Syringes are ideal for gas chromatography, for pipetting gas, for pipetting corrosive liquids, and particularly liquids which ordinarily cement syringe plungers to the barrel. They incorporate a stainless steel plunger, coated with corrosion resistant Teflon Resin, and a Teflon tip to provide for stiff but smooth plunger movement. Seven gas-tight syringe models, from a 0.05 ml capacity to a 10.0 ml capacity. *Patent pending.

Chaney Adaptors



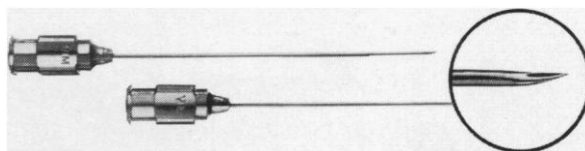
Chaney Adaptors were developed to rapidly deliver a precise quantity of liquid throughout a series of injections or deliveries. They easily give repeatability of 1% or better with semi-skilled operators. With careful work, repeatability can be 0.1%. These syringes with adaptors are ideal when chromatography is used for plant control, in the laboratory pipetting of standard solutions for routine analysis, or making a series of standard volume injections.

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of Hamilton
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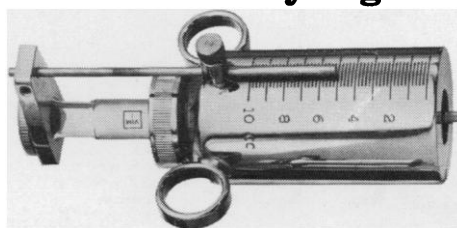
H.

Special Purpose Needles



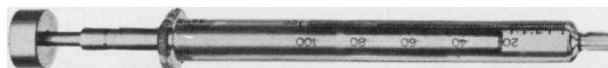
Hamilton needles are available in any length to about 8 feet, with any style point from a square polished tip for paper chromatography, to a 22 degree bent bevel polished for the penetration of septums or rubber closures. All stainless steel needles and the nickel plated brass hubs. These hubs, electroplated with gold, can be supplied with platinum needles in the following sizes: 22 and 28 gauge.

Shielded Syringes



Hamilton offers a complete set of Lead shielded syringes... the lightest weight of shield-to-size yet devised! 1/2 inch lead shielding equivalent to 4 hvls for gold or 16 fold radiation reduction. Beta shielded syringes are available that provide complete Beta shielding phosphorus³² or yttrium⁹⁰ in any concentration. The clear Pyrex glass envelope around the syringe gives direct reading of the syringe.

Pipet Controls*



Hamilton Microsyringe pipet controls make pipetting rapid and precise. Smooth control of the meniscus is guaranteed by Hamilton's excellent workmanship and quality control. The optimum in operating range for the 1 ml Microsyringe is from 1 lambda to 200 lambda. *Patent Number 2561273.

Micro and Semi-Micro Pipets



The Hamilton Micro and Semi-Micro Pipets, used in conjunction with Hamilton Microsyringe Controls, give excellent volumetric accuracy. They are individually calibrated "To Contain" or "To Deliver" their stated volumes.

Fraction Collector



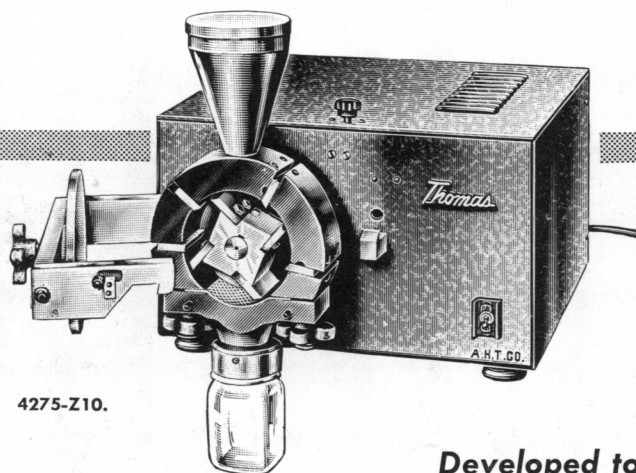
The Hamilton Fraction Collector isolates the exceedingly pure gas chromatograph fractions for supplemental analysis, such as by mass spectrometry and infra red or ultra violet spectrophotometry. It is particularly suited for low boiling hydrocarbons.

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New.... Model ED-5

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tobacco
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etc., etc.

*Developed to meet the demand for a size
between Intermediate and Model 3*

For laboratory or semi-pilot plant milling of a large variety of materials. A modification of the original Standard Model 3 Wiley Mill developed in response to requests for a mill offering the advantages of the basic Wiley Mill shearing principle but of smaller chamber capacity, i.e. approximately half that of the Standard Model. Modifications include a simplified sieve construction and other features for safe, convenient bench operation.

Retains the shearing action of the Standard Model which results from four hardened steel knives on a revolving shaft working against four knives bolted into the frame, with a clearance always between the cutting edges. Minimizes changes in the sample such as temperature rise, loss of moisture, liquefaction, contamination, etc., making this type of mill satisfactory for many materials which cannot be reduced by other mechanical means.

Grinding Chamber. Of cast iron and steel, 5 inches inside diameter x 2 inches deep. Door provides full access to chamber for cleaning. Four rotating knives, bolted to removable rotor, are precisely adjusted for shearing clearance with four individually adjustable knives mounted in the frame. Knife angles facilitate cleaning of the chamber. Fan action of the blades increases throughput and quick clearing of the chamber. Handwheels release chute beneath chamber for replacement of sieves.

Door. Handwheel clamping screw seals heavy steel plate door against the face of the mill. When released, door pivots on an aluminum bracket for full diameter access to the grinding chamber. *Safety electrical interlock disconnects motor when door is open.*

Knives. Of tool steel, hardened and tempered for toughness and retention of cutting edge. Stainless steel knives are available for use with corrosive materials.

Sieves. Curved, round hole screens of stainless steel, inexpensive and easily interchangeable. Align automatically when inserted. Shim plates, in the form of curved frames, are provided for use with the screens.

Receivers. Threaded collar at lower end of chute takes a standard Mason glass jar, which permits observation of finished product and is convenient for storage. Collar is removable for attachment of a bag or smaller neck vessel for collection of sample. Grinding chamber overhang ensures easy interchange of receivers.

Drive Unit. Provides unloaded rotor speeds of approximately 500, 800 or 1200 r.p.m. Louvered steel cabinet encloses 1/3 h.p. motor with thermal overload cutout, two 3-step pulleys, drive belt, rotor shaft ball bearing assembly, and storage compartment approximately 10 x 7 1/2 x 8 inches deep, for tools and sieves. Ball bearings are permanently lubricated and sealed. Hinged cover of cabinet provides easy access.

4275-Z10, Laboratory Mill, Wiley Model ED-5, as described, with 1/2, 1 and 2 mm sieves, three shim plates, three Allen keys, open-end wrench for knife adjustment, and three 1-pint Mason type jars. With 3-wire cord, 3-prong plug and adapter. Shipping weight 185 lbs. For 115 volts, 60 cycles, a.c. 690.00

For detailed description of Standard, Intermediate and Micro Models
of the Wiley Mill, see pp 346-350 of our 1961 general catalog



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