
6–7. Vertebrate Pest Control Conf., Sacramento, Calif. (M. W. Cummings, Univ. of California, Davis)


7–9. Military Electronics, Inst. of Radio Engineers, Los Angeles, Calif. (M. E. Brady, Space Technology Laboratories, P.O. Box 95001, Los Angeles)

7–10. American College of Radiology, annual, New York N.Y. (ACR, 20 N. Wacker Dr., Chicago 6, Ill.)

8. Problems in Food Processing, Assoc. of Vitamin Chemists, Chicago, Ill. (H. S. Perdue, Abbott Laboratories, North Chicago, Ill.)


12–23. Latin American Seminar on Irrigation, 2nd, Panama City, Panama. (J. Melendez, Jefe, Depto. de Ingenieria, Ministerio de Agricultura, Comercio e Industrias, Panama City)


16–18. Medical Congr. in Honor of the Centennial of Bretonneau, Tours, France. (Directeur, Ecole Nationale de Medecine, Tours)

17–24. Pan American Medical Women's Alliance, 8th congr., Manizales, Colombia. (C. Carthers, 1661 Riverside Ave., Suite B, Jacksonville, Fla.)


(See 22 December issue for comprehensive list)
New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.

Information logger is a 30-channel instrument designed and developed as a wind-data-conversion system. Sample time per channel is 100 μsec, and reading time is 140 μsec. Multiplexing and conversion accuracy, based on 5-volt maximum input, is said to be ±0.1 percent. Output data are available at either a high or low rate. High-speed data output is employed for external monitoring by magnetic tape. These data are also available to a supervisory display board that displays ten channels at a time, with each display capable of presenting any one of the possible channels as selected by switch. Lower-speed data acquisition, under the control of a 300-cps/sec paper-tape perforator, may be selected at a readout interval of 1, 2, 5, 10, or 60 sec. A manual control permits selection of other readout rates. The information logger accepts bipolar, analog-signal inputs that are converted into digital words. Each analog channel presents to the input transducers an input impedance of 50 kohm. The order of channel sampling can be changed by a plugboard arrangement. Each analog input channel can be checked for accuracy, linearity, and channel identification. (Lockheed Electronics Co., Dept. Sci515, U.S. Highway 22, Plainfield, N.J.)

Power supply that can be programmed provides a regulated continuously adjustable output, from 0 to 40 volts d-c, that can be changed with a front panel control or with an external resistance at 50 ohm/v. Full-load output current is 500 ma over the entire range. A current limit control, adjustable between 60 and 600 ma, protects circuits being tested. Programming can be accomplished from a distance by use of stepping switches to change resistance values. (Hewlett Packard Co., Dept. Sci512, 1501 Page Mill Rd., Palo Alto, Calif.)

Calibrator for transducers and associated instrumentation provides a multiplicity of mv/v or mv settings. The unit provides 55-mv/v output signals in five ranges, from 0-0.5 to 0-10, with 11 points per range. Each point is said to be accurate within ±0.1 percent or ±0.0003 mv/v, whichever is greater. A choice of 120- or 350-ohm source resistance is provided. The calibrator can be used for calibrating millivolt instruments if powered by a known regulated voltage. (Baldwin-Lima-Hamilton Corp., Dept. Sci514, 42 Fourth Ave., Waltham 54, Mass.)

Amplifier for signals from photovoltaic cells provides a gain of 10 to permit measurement of illumination levels less than 5 ft-candles. The self-contained device features ±2 percent linearity, on-off control for zeroing of a moving-coil instrument, and a four-hole base for quick mounting. Power is provided by a 1.34-volt mercury cell. (Daystrom, Inc., Dept. Sci510, 614 Frelighuysen Ave., Newark 14, N.J.)

Low-temperature chamber employs a standard commercial nitrogen cylinder as refrigeration agent. The temperature control system uses an electronic thermocouple potentiometer control network programmed by a plastic cam that can be shaped to produce any time-temperature curve desired. The system is said to respond at rates up to 25°C per minute over a range of...
CHEMICALS FOR THIN LAYER CHROMATOGRAPHY

The most complete line of adsorbents—as standardized by Stahl—for thin layer chromatography. Particle size is appropriate to the technique, and a binding agent is included. Materials currently available at new lower prices include:

- Silica Gel G
- Aluminum Oxide G
- Kieselguhr G

Also:
- New Spray Reagents in Aerosol Cans

E. MERCK
(GERMANY)

For further information contact:
U.S. Distributors

BRINKMANN
BRINKMANN INSTRUMENTS, INC.
115 Cutter Mill Road, Great Neck, N.Y.

PHILADELPHIA • CLEVELAND • HOUSTON • MIAMI • MENLO PARK, CAL. • ST. LOUIS

12 JANUARY 1962
THE FINEST molded seamless construction IN CAGES FOR of rugged fiber glass reinforced plastics... minimum effort required to clean and disinfect... maximum animal comfort... extremely strong doors with fool proof catches... economical to purchase and maintain.... For further information write: Department KS

Kirschner Manufacturing Company Vashon, Washington

THE ORIGINAL TIME-TESTED GLASS PLASTIC CAGE

YOU'RE LOOKING AT THE WORLD'S MOST PRECISE CUTTING TOOL

The DuPont Diamond Knife, so precise it can make a million cuts in a half-inch strand of hair! So perfect you can produce specimens as thin as 100 Å (angstroms). Available now, for use with all embedding materials, including epoxies.

Du Pont Diamond Knives come premounted in boats that clamp into glass-knife holders of the Porter-Blum, Leitz, LKB, Reichert and other microtomes. Edge lengths from 1 mm. to 8 mm. are available, with included angles from 30° to 60°.

The price is $100, plus $100 for every mm. of cutting edge. Address inquiries and orders to: R. E. Sugg, Mechanical Research Laboratory, Section B, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware. Or call PROspect 4-7666.

Better Things for Better Living... through Chemistry

SCIENCE in Communist China

CONTENTS

SCIENCE AND SOCIETY. 4 chapters
BIOLOGICAL AND MEDICAL SCIENCES. 7 chapters
ATMOSPHERIC AND EARTH SCIENCES. 4 chapters
MATHEMATICS AND THE PHYSICAL SCIENCES. 5 chapters
ENGINEERING SCIENCES AND ELECTRONICS. 6 chapters

This new AAAS symposium volume represents a systematic effort on the part of American scientists, many of them of Chinese origin, to give a clear, unified account of material gleaned from about 250,000 pages of scientific journals and books published in Continental China.

Until now, information about science and scientific development under Communist control has not been available to Western scientists because of the language barrier, and because so few copies of relevant books and journals have been available.

This volume presents a heretofore unavailable opportunity to assess a decade of science in Communist China.

Price: $14.00* ($12, prepaid, for AAAS members)

Individual membership in the AAAS offers many benefits in addition to savings on AAAS volumes. It includes Science, and the quarterly AAAS Bulletin.

Order today from

American Association for the Advancement of Science
1515 Massachusetts Avenue, NW

Washington 5, D.C.
+20° to −200°C. The model 3005 provides controlled temperature over the entire range. The model 3005A, which uses a liquid-filled bulb system instead of the electronic thermocouple temperature network, provides temperature control between +20° and −100°C and functions at full refrigerating capacity below that range. (Cryo-Therm, Inc., Dept. Sci513, Fogelsville, Pa.)

**D-c corona test set** includes a 20-kv, corona-free, d-c high-voltage supply; corona pickup filter network; and corona detector. The test set displays the voltage pattern of corona discharge on a built-in oscilloscope. A vacuum bell jar and table allow simulated high-altitude testing of insulating materials, cable components, and assemblies. The high-voltage supply is continuously adjustable between 0 and 20 kv. Output metering ranges of 0 to 5 and 0 to 20 kv, and of 0 to 50, 0 to 500, and 0 to 5000 μa leakage current are provided. (Associated Research, Inc., Dept. Sci521, Chicago, Ill.)

**Barium fluoride crystal** is doped with uranium for laser applications and produces output radiation of wavelength 26,000 A. The crystals are ¼-in. diameter and are available in lengths up to 1½ to 1¾ in. They are priced at $150 per inch of length. Fabricated finished crystals for laser use are also available. (Semi-Elements, Inc., Dept. Sci502, Saxonburg Blvd., Saxonburg, Pa.)

**Signal conditioning system**, a transistorized system of modular construction, accepts low-level signals from strain-gage transducers and produces an amplified voltage proportional to the input signals. The instrument incorporates input condition, automatic calibrator, power supply, balance indicator, and amplifier into a space that permits four channels to be accommodated by a rack 7 in. high and 19 in. long. The system's overall stability is said to be ±0.02 percent; noise less than 5 μv; output up to 100 ma. Plug-in cards permit change in value of calibration resistors and addition of dummy arms for one or two active-arm bridges, a resistance thermometer input, and a reference junction for thermocouple applications. (Allegany Instrument Co., Dept. Sci518, 1091 Wills Mountain, Cumberland, Md.)

**Joshua Stern**

**National Bureau of Standards,**

**Washington, D.C.**

---

**FROM JELLY JARS TO EPITAXIAL LAYERS...**

**new IR-5A spectrophotometer offers precise infrared analysis at low cost!**

To check composition of lining material in jar lids, a jelly manufacturer uses the IR-5A to identify material as vinyl chloride-acetate copolymer.

Precision analysis and sampling versatility are now **combined** in one low-cost infrared spectrophotometer—the Beckman® IR-5A. This rugged laboratory workhorse is used in an ever-increasing number of applications ranging from the food quality control analysis above to thickness measurements of epitaxial semi-conductor layers. In the chemical and petroleum industries and in nearly every other field, the Beckman IR-5A is relied upon for widely diverse studies and applications. A few examples:

**FOOD RESEARCH:** Identification and study of flavor components, packaging materials, and insecticide residues

**MEDICINE:** Identification of drugs, characterization of renal calculi, analysis of D2O in body fluid

**EDUCATION:** Instruction in instrumentation; identification of unknowns in organic chemistry courses; laboratory studies in graduate research programs

**AEROSPACE TECHNOLOGY:** Measurement of trace contaminants in breathing and propellant oxygen

**PHARMACEUTICALS:** Quality control of formulations; research into new chemical structures

**AGRICULTURE:** Research on new compounds that show promise as herbicides, weedicides, or pesticides

**MINERALS:** Identification of precious and semi-precious gems; hydration studies in ores and cements

**PAPER:** Identification and measurement of polymer coatings on papers

**PAINT:** Identification of constituents of paints and coatings

These are only a few of countless applications in many fields. For details about your own needs, contact your nearest Beckman sales office. Ask about the IR-5A with NaCl optics for the 2-16 micron range, or the CsBr version for the 11-35 micron region. Both feature dual speeds, single- or double-beam operation, and integral plug for external recorder. Or write Beckman for Data File 38-2-02.
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 not. 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 one request 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
3 Massachusetts Ave., NW Washington 3, D.C.

POSITIONS WANTED

Ph.D. Microbiology, 1 year postdoctorate in virology. Major interest animal virus. Research or teaching. Box 3, SCIENCE 1/12

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

FOOD and DRUG RESEARCH LABORATORIES

Cornell University, Ithaca, N.Y.

Positions Open

(a) Biochemist, clinical, unusually well qualified, instrument minded; top salary. East. (b) Biologist, B.S./M.S. experienced; product development; Midwest. (c) Biochemist/Physiologist, supervise laboratory and pulmonary functions; midwestern hospital; $10,000-$15,000. (d) Analytical Chemist familiar with instrumentation, medical and biological analyses; over $10,000. Midwest. (e) Director of Virus Research, eastern pharmaceutical house; $10,000-$15,000. (f) Pharmacologist, knowledge of drug screening: $10,000-$15,000. East. (g) Clinical Biochemist to develop and expand department; midwestern hospital. (h) Chemist, supervisory, experienced in medicinal chemistry; pharmaceutical research; East. (i) Biochemist/Bacteriologist for eastern hospital laboratory. (j) Microbiologist, experienced in virology, tissue culture, research, midwestern hospital; $8000-$9000. Many other opportunities available for both Junior and Senior Scientists. Please write Science Division, THE MEDICAL BUREAU, INC., Barnertt Larson, Chairman, 900 North Michigan Avenue, Chicago 11, Illinois.

ELECTRONICS ENGINEER

Ph.D. or equivalent experience; background in service mechanisms, transistor circuitry, digital computers; join medical team with aggressive experimental program in medical electronics. Long-term NIH support. New York City area. Box 5, SCIENCE.

INVERTEBRATE ZOOLOGIST and/or PARASITOLOGIST. For well-known biological supply house. Challenging opportunity for energetic and imaginative person. Supervise and develop wide range of laboratory cultures. Close liaison with advancing areas of biological sciences and education. Ph.D. degree, teaching experience, and knowledge of biological techniques desired. Box 231, SCIENCE.

TECHNICIAN

Capable of doing hypophysectomy of mice. Will pay on a fee basis (per operation). Contact Dr. Max Hambourg, Department of Anatomy, Albert Einstein College of Medicine, Eastchester Road and Morris Park Ave., New York 61, N.Y.

SUPPLIES AND EQUIPMENT

SUPPLIES AND EQUIPMENT

PROFESSIONAL SERVICES

CONSULTATION AND RESEARCH SINCE 1932

Food and Drug Research Laboratories

Toxicology, Pharmacology
Nutrition, Biochemistry, Bacteriology

WHERE EXPERIENCE COUNTS

SUPPLIES AND EQUIPMENT

YOU NEED THIS FREE CATALOG FOR YOUR FILES

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

COLORADO SERUM CO.
4950 York St. • MAIN 3-5733 • Denver 16, Colo.

From the hand of the veterinarian to research®

albino rats

CHARLES RIVER • CD
(Caesarean derived)

CHARLES RIVER SD
(Sprague-Dawley descendants)

CHARLES RIVER W (Wistar descendants)

HYPOPHYSECTOMIZED RATS

• Only Charles River CD animals used
• Rigidly controlled environment (same bldg.) birth to surgery
• High speed surgery by graduate biologists.
• 10 years experience animal surgery
• Overnight air service from Boston

THE CHARLES RIVER BREEDING LABS
1018 Beacon St., Brookline 46, Mass. 62. 2-4000

Henry L. Foster, D.V.M., President

BOOKS AND MAGAZINES

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, CANNER’S, Inc., 509 Washington St., Boston 20, Massachusetts

PARENTS AND TEACHERS: With Cuisenaire® rods children enjoy learning mathematics.

For information write: CUISENAIRE CO. OF AMERICA, INC., Dept. 5, 235 East 50 St., N.Y. 22, N.Y.

AAAS SYMPOSIUM VOLUMES

CALCIFICATION IN BIOLOGICAL SYSTEMS

Edited by R. F. Sognnaes, 526 pages with 283 illustrations, references, and index; $9.75
$8.50 cash orders from AAAS members

CONGENITAL HEART DISEASE

Edited by Allan D. Bass & Gordon K. Moe, 372 pages with 147 illustrations, references, and index; $7.50
$6.50 cash orders from AAAS members

Order today from AAAS
1515 Massachusetts Ave., N.W. Washington 5, D.C.