

wandte Optik, Zeppelinstr. 23, 7920 Heidenheim, Germany)

19-23. **Energy Metabolism**, 3rd symp., Ayr, Scotland. (European Assoc. for Animal Production, Corso Trieste, 67, Rome, Italy)

19-30. International **Electrotechnical Commission**, general meeting, Aix-les-Bains, France. (American Standard Assoc., 10 E. 40 St., New York 16)

20. Memorial Hospital of Long Beach, **medical staff symp.**, Long Beach, Calif., (G. X. Trimble, 2801 Atlantic Ave., Long Beach 6)

20-23. Canadian Assoc. of **Geographers**, 14th annual, London, Ont. (CAG, P.O. Box 421, Ottawa, Ont., Canada)

20-27. **Air Pollution**, European conf., Strasbourg, Austria (A. Stern, Div. of Air Pollution, U.S. Public Health Service, Washington, D.C. 20201)

20-28. Modern Methods for **Analysis of Organic Compounds**, symp., Eindhoven, Netherlands. (Gesellschaft Deutscher Chemiker, Postfach 9075, Frankfurt-am-Main, Germany)

21-22. American **Geological Inst.**, Toronto, Ont., Canada. (D. M. Kinney, U.S. Geological Survey, Washington, D.C.)

21-22. Southern **Textile Research Conf.**, Hilton Head Island, S.C. (American Assoc. of Textile Chemists and Colorists, P.O. Box 886, Durham, N.C.)

21-23. **Minerals**, 9th annual symp., Moab, Utah. (J. C. Fox, Soc. of Mining Engineers, 345 E. 47 St., New York, N.Y.)

21-23. California Soc. of **Professional Engineers**, annual, Palm Springs, Calif. (J. C. Huisking, 970 Hillcrest Dr., Pomona, Calif.)

23-24. **Radiosensitizers and Radioprotective Drugs**, 1st intern. symp., Milan, Italy. (R. Paoletti, Pharmacology Inst., Via A. del Sarto, 21, Milan)

24-28. Near and Middle East **Medical conf.**, Istanbul, Turkey. (P. Ponthus, Institut de Radiologie et de Lutte Contre le Cancer, Hotel-Dieu de France, Beirut, Lebanon)

24-29. International Federation for **Information Processing**, global conf., New York, N.Y. (A. P. Speiser, I.B.M. Research Laboratory, Zurichstr. 108, Adliswil-Zurich, Switzerland)

25. **Organic Solid State**, 2nd symp., Franklin Inst., Philadelphia, Pa. (M. M. Labes, Franklin Inst. Laboratories, 20th and The Parkway, Philadelphia 3)

25-27. American **Gynecological Soc.**, Hot Springs, Va. (AGS, 3800 Reservoir Rd., Washington, D.C. 20007)

25-27. **Power Reactors and Radioisotopes**, Canadian Nuclear Assoc., Toronto, Ont. (CNA, 19 Richmond St. West, Toronto 1, Ont.)

25-29. Society of **Physical Chemistry**, 14th annual, Bordeaux, France. (G. Emschwiller, Soc. de Chimie physique, 10, rue Vauquelin, Paris 5^e, France)

26-29. **Water Studies**, 17th intern. conf., Liège, Belgium. (Cebedeau—Journées 1964, 2, rue A. Stevart, Liège)

27-29. American **Ophthalmological Soc.**, Hot Springs, Va. (AOS, 108 E. 68 St., New York, N.Y. 10021)

27-29. Canadian **High Polymer Forum**, 12th, Ste. Marguerite, Quebec. (H. Daoust, Dept. of Chemistry, University of Montreal, P.O. Box 6128, Montreal, P.Q.)

17 APRIL 1964

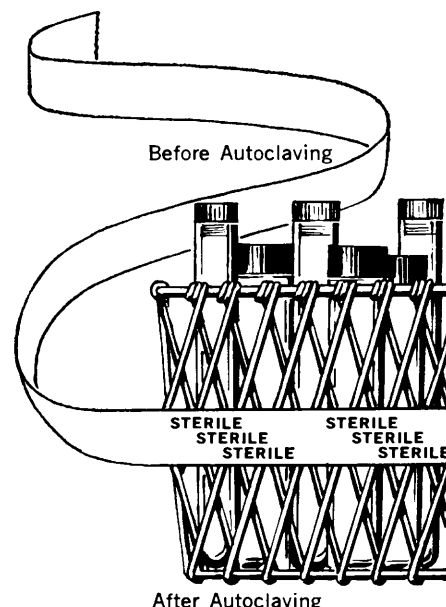
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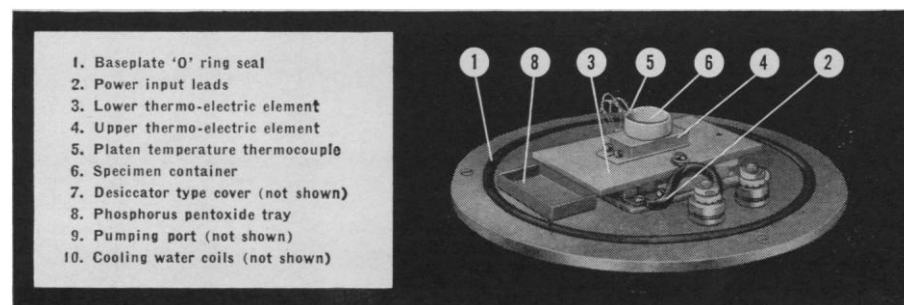
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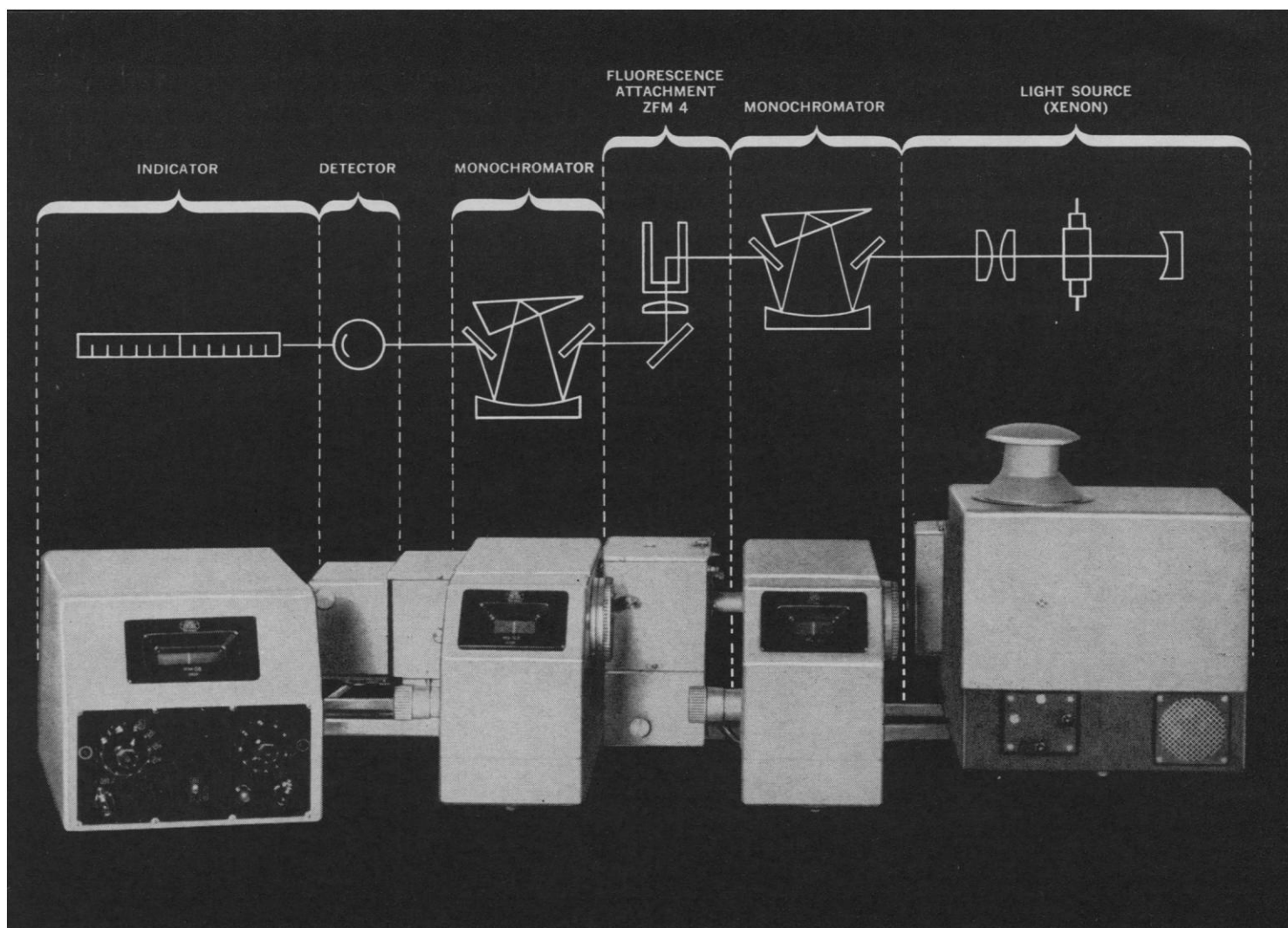


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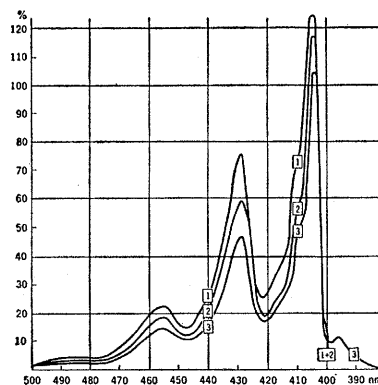
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New Products

Ultracentrifuge applications are enumerated in a 20-page reference work on preparative and density gradient centrifugation, published by the Spinco Division of Beckman Instruments. Preparative applications include the separation, purification, or concentration of materials, while density gradient techniques encompass a wide range of uses from purification and concentration to the determination of sedimentation coefficients. Other analytical techniques not employing density gradients are included with the specific determination described briefly in each case. This publication lists over 300 specific applications of the preparative ultracentrifuge, cited in the technical literature. The information, in abbreviated form, is grouped under headings such as enzymes, nucleic acids, subcellular fractions, and viruses. Each specific application is keyed by a number to its source listed in the bibliography which consists of 250 references.—D.J.P. (Beckman Instruments, Inc., Spinco Div., Dept. S230, Palo Alto, Calif.)

Electrophoresis system can separate and quantitate proteins in eight samples of serum in 90 minutes by employing the thin-film agar technique which substitutes ultraviolet light absorption for time-consuming protein staining. The ultraviolet light absorption method also offers much greater reliability. Called the Spectrophor I,

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Ultramicro radiation dosimeter is based on thermoluminescence of lithium fluoride phosphor. In operation, the phosphor absorbs radiation which produces trapped energy states in the crystal that are released as luminescence on heating the crystal. The volume of phosphor used is only .01 cm^3 , and many new possibilities are opened for precise, point dosimetry. Dosimeters are available in a variety of shapes. A particularly valuable form is one less than 10 mm long and with a diameter of 1 mm, and which is designed to fit inside a No. 18 syringe needle. The dynamic dose range of this dosimeter is from 300 mr to 100,000 r. Sensitivity of the system is increased to 10 mr through use of larger volume of phosphor (0.06 cm^3). These dosimeters can be fabricated to contain a radiopaque head and tail for exact location of x-ray if embedded in a subject. Because of its very small size and extremely large dose range, it has great possibilities for in vivo measurements in radiation research and radiation therapy. The dosimeter

can be easily inserted into body cavities and can be placed anywhere within the body by syringe needle insertion for depth dose determination and internal dose distribution. This ultramicro dosimeter is particularly applicable for determining beam dose distributions in radiation sources such as Van de Graaff generators, linear accelerators, x-ray generators, cyclotrons, and betatrons. It also is valuable for accurate determination of isodose contour mapping, attenuation studies, and shielding evaluation. The device is said to be useful from 10 kev x-rays to gamma rays, and electrons, betas, fast neutrons, and protons can be measured.—R.L.B. (Controls for Radiation, Inc., Dept. S223, 130 Alewife Brook Parkway, Cambridge 40, Mass.)

Glass transfer tapes are designed for coating a desired surface with a glass layer. Applications suggested by the manufacturer include: substrates for thin evaporated films, protective coatings, microencapsulations, glass-to-glass or metal-to-glass seals. The glass transfer tape consists of a glass frit layer attached to a plastic carrier film. The frit layer is generally transferred from the carrier film to the desired surface by an adhesive layer that is activated by pressure. The type and melting point of the glass frit are selected for the particular requirement. The thickness of the layer is generally varied between 0.0008 and 0.005 inch (0.002 and 0.001 cm). The width of the layer is 88 inches (224 cm) in standard form but other widths and thicknesses can be furnished.—J.S. (Vitta Corp., Dept. S205, 382 Danbury Rd., Route 7, Wilton, Conn.)

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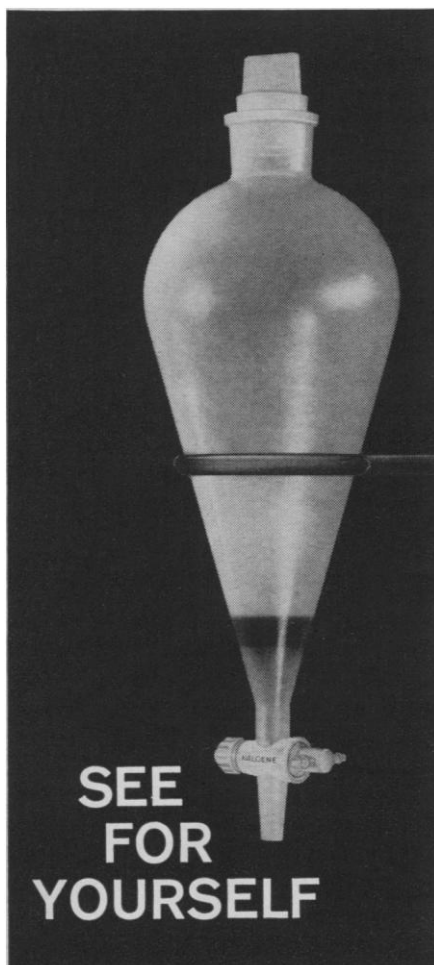
The material in this section is prepared by the following contributing writers:

Robert L. Bowman (R.L.B.), with the assistance of Denis J. Prager (D.J.P.), Laboratory of Technical Development, National Heart Institute, Bethesda 14, Md. (medical electronics and biomedical laboratory equipment).

Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

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Dynamic deflection transducer (model 1012) uses a digitized tape with alternate, equal-width, opaque, and transparent bands that pass between a light source and a masked photocell. The photocell output is a sawtooth voltage in which each half cycle of voltage alternation corresponds to a deflection equal to one sector width. The amplified voltage output can be applied to an oscilloscope recorder to obtain a digital deflection record. The transducer may be fixed to a reference plane with double-sided adhesive tape for temporary installations or through base-mounting holes for permanent installations. Tapes are available with 0.025-inch (0.063-cm) spacing and 2-inch (5-cm) active length. Other grid spacings can be made to customer specification.—J.S. (Allied Research Associates, Inc., Dept. S206, Virginia Rd., Concord, Mass.)

Air-displacement porometer (model 301) measures void and bulk volumes, porosities, and theoretical densities of porous solid samples such as disks, plasma sprayed coatings, ceramic objects, and other materials. The gas displacement principle is used to perform the measurement. It uses an impervious, close-fitting covering for the specimen, and the specimen is mounted in a larger cell. After the specimen is placed in the cell, measurements with a Bourdon-type gage are made to determine the internal voids in the specimen as well as the volume external to the test piece. These permit calculation of pore and bulk volume porosities and absolute and effective densities. Time of analysis is given as 5 minutes.—J.S. (NUMEC Instruments and Controls Corp., Dept. S204, Apollo, Pa.)

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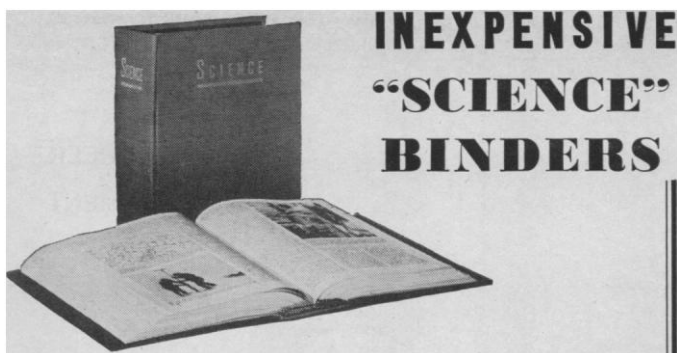
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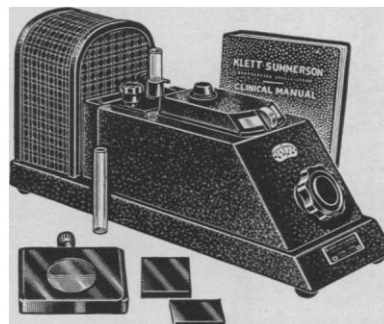
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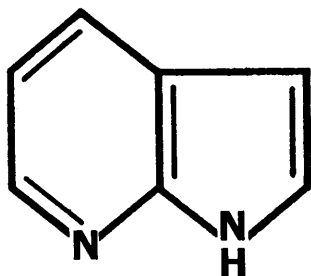
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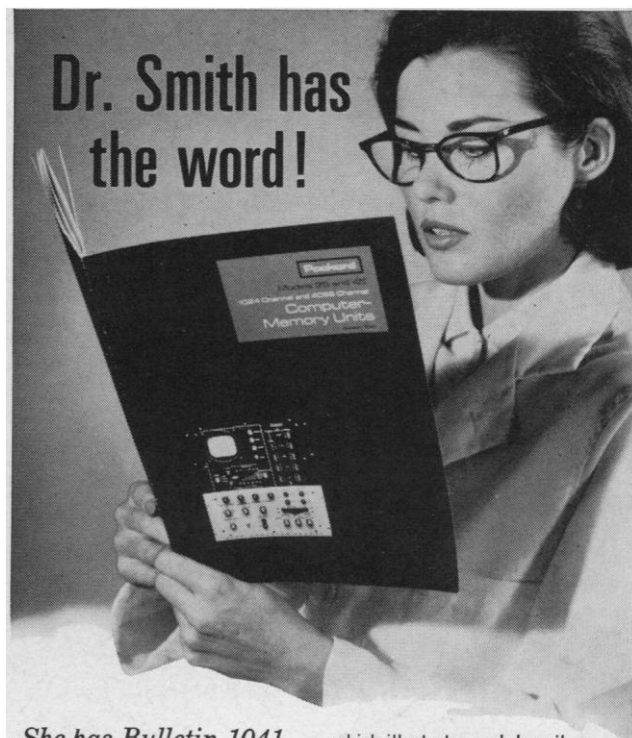
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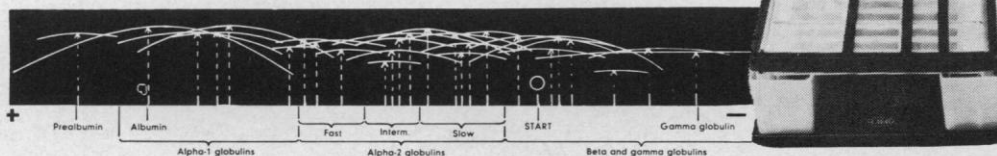
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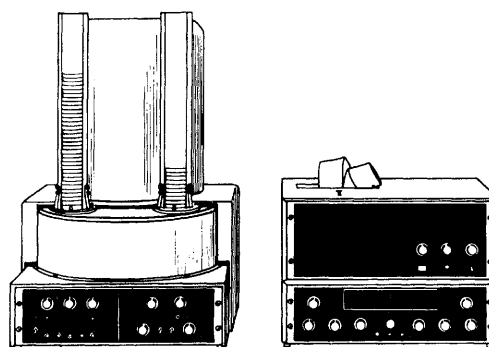


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