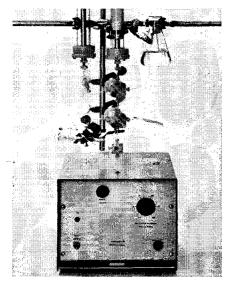
# New pump brings new precision to chromatography



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Chromatronix also makes chemically-inert columns, fittings, and control valves-designed without mixing cavities to increase resolution.

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Circle Ng. 25 on Readers' Service Card

# ACS Short Courses—154th National Meeting Sept. 10 to 15, Chicago, III.

The American Chemical Society has scheduled a full complement of short courses to be given during the 154th National Meeting in Chicago, Ill. Membership in ACS is not required. Listed below are the courses, dates, and professor-in-charge. Exact locations within the city will be announced later. Further information is available from the Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337)

Electron Spin Resonance	Sept. 7-9	John E. Wertz
Boron in Organic Chemistry	Sept. 8-9	Herbert C. Brown
Optical Rotatory Dispersion and Circular	Sept. 8-9	Stanley Kirschner
Dichroism	•	Bodie E. Douglas
Interpretation of Infrared Spectra	Sept. 9-10	Norman B. Colthup
Carbonium Ions	Sept. 10-11	George A. Olah
High-Temperature Chemistry	Sept. 10-11	John L. Margrave
Oxidation Reactions in Organic Chemistry	Sept. 12-13	Ross Stewart
Radiochemistry	Sept. 14-15	Gregory R. Choppin
Thermal Methods of Analysis	Sept. 14–16	Wesley W. Wendlandt

# Scheduled Courses in Analytical Techniques

Aug. 2 to 4—Gas Chromatography. St. Louis, Mo. Contact: Varian Aerograph, 205 West Touhy Ave., Park Ridge, Ill.

Aug. 7 to 9—Documentation of Instrumental Data. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800).

Aug. 7 to 11—Infrared Spectroscopy. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800)

Aug. 7 to 11—Gas Chromatography for Practicing Chromatographers. Colorado Woman's College, Denver, Colo. Sponsor: Instrument Society of America. Contact: Dr. C. E. Borchers, Northwestern University, Evanston, Ill. 60201.

Aug. 7 to 11—Bioanalytical Techniques Workshop. Hopatcong, N. J. Contact: Saul Gordon Associates Center for Professional Advancement, P. O. Box 566, Hopatcong, N. J. 07843. (Tel: 201-398-7110).

Aug. 9 to 11—Differential Scanning Calorimetry. University of Massachusetts. Contact: Dr. Sidney Siggia, Dept. of Chemistry, University of Massachusetts, Amherst, Mass. 01002.

Aug. 9 to 11—Gas Chromatography. Washington, D. C. Contact: Varian Aerograph, 2095 U.S. Route 22, Union, N. J

Aug. 11 to 12—Nonlinear Estimation. Chicago, Ill. Sponsor: American Society for Quality Control. Contact: Mr. Frank Medgin, Research and Development Center, Swift and Co., Exchange and Packers Aves., Chicago, Ill. 60609.

Aug. 14 to 18—Scientific Photography for Research and Engineering. Hopatcong, N. J. Contact: D. W. Mayer, Saul Gordon Associates, Center for Professional Advancement, P. O. Box 566, Hopatcong, N. J. 07843. (Tel: 201-398-7110). Page 61 A, July.

Di A, July.

Aug. 14 to 19—Concurrent Sessions (Lectures and Labs): Infrared Spectroscopy (Basic Theory and Techniques); Gas-Liquid Chromatography. Fisk University. Contact: Fisk Institute Director, Box 8, Fisk University, Nashville, Tenn. 37203.

Aug. 14 to 25—Twelfth Annual Program in Modern Industrial Spectroscopy. Arizona State University. Contact: Jacob Fuchs, Dept. of Chemistry, Arizona State University, Tempe, Ariz. (Tel: 602-966-3461).

Aug. 18 to 19—Biomedical Applications of Thin Layer Chromatography. Jefferson Medical College. Philadelphia. Pa. Contact: Robert H. Maxwell. Analtech. Inc.

Medical College, Philadelphia, Pa. Contact: Robert H. Maxwell, Analtech, Inc., 100 S. Justison St., Wilmington, Del. 19801. (Tel: 302-656-4436).

Aug. 21 to 23—X-Ray Stress Analysis Seminar. Nashville, Tenn. Contact: Dr. Robert S. Goodrich, Materials Science Division, Vanderbilt University, Nashville,

Tenn. 37203.

ug. 21 to 25—Concurrent Sessions (Lectures and Labs): Interpretation of Infrared Spectra; Ultraviolet—Visible Spectroscopy (Basic Theory and Techniques). Fisk University. Contact: Fisk Institute Director, Box 8, Fisk University, Nash-Aug. 21 to 25-

ville, Tenn. 37203.

Aug. 21 to 25—Electroanalytical Techniques Workshop. Hopatcong, N. J. Contact:
Saul Gordon Associates Center for Professional Advancement, P. O. Box 566, Hopatcong, N. J. 07843. (Tel: 201-398-7110).

Aug. 21 to 25—Gas Chromatography. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800).

One-Day Workshop on Internal Reflection Spectroscopy. South Norwalk, Sept. 5-Contact: Wilks Scientific Corp., 140 Water St., South Norwalk, Conn. Conn. Contact: Wilks 5 06856. (Tel: 203-838-4537).

Sept. 6 to 9-ACS Short Course on Molecular Characterization of Polymers. Min-

Sept. 6 to 9—ACS Short Course on Molecular Characterization of Polymers. Minneapolis-St. Paul. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).
Sept. 7 to 8—ACS Short Course on Interpretation of Mass Spectra. Albany, N. Y. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).
Sept. 11 to Oct. 6—Radioisotope Techniques. Oak Ridge, Tenn. Contact: Special Training Division, Oak Ridge Associated Universities, P. O. Box 117, Oak Ridge, Tenn. 37830.

Sept. 11 to 14—Paper Physics Workshop on Microscopy. Pick Congress Hotel, Chicago, Ill. Contact: T. S. McConnell, TAPPI, 360 Lexington Ave., New York, N. Y.

Sept. 11 to 15—Activation Analysis. San Diego, Calif. Contact: General Dynamics/ General Atomic Division, P. O. Box 608, San Diego, Calif. 92112.

Sept. 11 to 15—Infrared Spectroscopy. Philadelphia, Pa. Contact: Sadtler Research

Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-

Sept. 18 to 20—Particle Characteristics Conference. New York City. Contact: Coulter Electronics Industrial Division, 2601 N. Mannheim Rd., Franklin Park, Ill. 60131.

Sept. 18 to 20—Gas Chromatography. Houston, Texas. Contact: Varian Aerograph, 6400 Southwest Freeway, Suite 310, Houston, Texas.

Sept. 18 to 22—Advanced Infrared Spectroscopy. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800)

Sept. 21 to 22-Gas Chromatography. Oklahoma City, Okla. Contact: Varian Aero-

Sept. 21 to 22—Gas Chromatography. Oklahoma City, Okla. Contact: Varian Aerograph, 6400 Southwest Freeway, Suite 310, Houston, Texas.
Sept. 25 to 27—Particle Characteristics Conference. Chicago, Ill. Contact: Coulter Electronics Industrial Division, 2601 N. Mannheim Rd., Franklin Park, Ill. 60131.
Sept. 25 to 29—Two Separate Courses: Gas Chromatography; Nuclear Magnetic Resonance Spectroscopy. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800).
Sept. 29 to 30—ACS Short Course on Infrared Spectroscopy. Stamford, Conn. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).
Sept. 29 to Oct. 2—ACS Short Course on Molecular Characterization of Polymers. Buffalo, N. Y. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).
Oct. 2 to 4—Gas Chromatography. Cincinnati, Ohio. Contact: Varian Aerograph, 205 West Touhy Ave., Park Ridge, Ill.
Oct. 2 to 4—ACS Short Course on Interpretation of NMR Spectroscopy. Providence, St. (Science St.)

Oct. 2 to 4—ACS Short Course on Interpretation of NMR Spectroscopy. Providence,

R. I. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).

Oct. 2 to 13—Industrial Use of the Polarizing Microscope. Chicago, Ill. Contact: Mrs. Miriam L. Fallert, Registrar, McCrone Research Institute, 451 E. 31st St., Chi-

Oct. 5-One-Day Workshop on Internal Reflection Spectroscopy. South Norwalk, Conn. Contact: Wilks S 06856. (Tel: 203-838-4537). Wilks Scientific Corp., 140 Water St., South Norwalk, Conn.

Oct. 5 to 7—Gas Chromatography. Indianapolis, Ind., Contact: Dr. R. M. Brooker, Dept. of Chemistry, Indiana Central College, Indianapolis, Ind. 46227.

Oct. 6 to 8—ACS Short Course on Interpretation of NMR Spectroscopy. Institute, W. Va. Contact: Education Office, American Chemical Society, 1155 Sixteenth St., N. W., Washington, D. C. 20036. (Tel: 202-737-3337).

Oct. 9 to 11—Gas Chromatography. Chicago, Ill. Contact: Varian Aerograph, 205

West Touhy Ave., Park Ridge, Ill.

Oct. 9 to 13—Two Separate Workshops: Thin Layer Chromatography; Gas Chromatography. Madison, Wis. Contact: University of Wisconsin, University Extension, Engineering Dept., 432 North Lake St., Madison, Wis. 53706.

Oct. 9 to 13—Basic Techniques of Infrared Spectroscopy. Philadelphia, Pa. Contact:

Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-7800).
Oct. 16 to 20—Direct Reading Emission Spectrometry. Monrovia, Calif. Contact:

T. R. Garrett, Consolidated Electrodynamics Corp., 1500 S. Shamrock, Monrovia,

Oct. 16 to 20-Infrared Spectroscopy. Philadelphia, Pa. Contact: Sadtler Research Laboratories, Inc., 3316 Spring Garden St., Philadelphia, Pa. 19104. (Tel: 215-382-

# Midwest ACS Meeting

The 1967 Midwest Regional ACS Meeting will be held at the University of Missouri, Columbia, Mo., November 2 and 3. In additions to papers from the analytical, physical, inorganic, and organic chemistry divisions, there will be symposia on photochemistry and trace analysis. A plenary lecture will be given by Dr. Charles G. Overberger, President of the ACS. General Chairman of the meeting is Dr. Norman Rabjohn of the University of Missouri. Program Chairman is Dr. Donald W. Setser, Chemistry Dept., Kansas State University, Manhattan, Kan. 66504. More information on this meeting is available from Dr. John E. Bauman, Jr., Dept. of Chemistry, University of Missouri, Columbia, Mo. 65201.

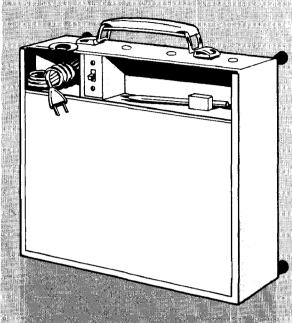
## International Conference on Thermal Analysis

The Second International Conference on Thermal Analysis will meet August 18 to 23, 1968 at Holy Cross College, Worcester, Mass., U. S. A. Dr. C. B. Murphy of Xerox Corp. is General Chairman. Program Chairman is Professor Paul D Garn of the University of Akron, Akron, Ohio 44304, U.S. A. Papers are invited on the general subjects: advances in instrumentation; organic materials including polymers; inorganic materials and metallurgy; physical chemistry and quantitative aspects; minerals; and applied sciences (building materials, ceramics, etc.). Languages acceptable are English, French, and German. The proceedings will be published.

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