

• *New Literature*

BRINKMANN INSTRUMENTS, INC., has four new brochures: 1) an illustrated 48-page bulletin detailing the uses of their TLC apparatus and accessories for column chromatography and gas chromatography (Bulletin no. BR 153); 2) a price list for all their basic equipment, accessories and chemicals for TLC, column chromatography and gas chromatography (Bulletin no. P103, complementary to BR 153); 3) a price list for E. Merck deuterated solvents, normal solutions, reagents, and NMR and IR spectroscopy solvents and internal standards (Bulletin no. P102); 4) a bibliography for TLC, with approximately 800 entries. (Cantiague Road, Westbury, N. Y. 11590)

AUTOMATED SAMPLING reminds readers of the availability of their concise monthly bulletin describing their products. (6139 Fleur Dr., P. O. Box 2706, Des Moines, Iowa)

APPLIED SPECTROSCOPY is published bimonthly by the AMERICAN INSTITUTE OF PHYSICS as the official publication of the Society for Applied Spectroscopy. The periodical offers original contributions covering the theory and practice of absorption spectroscopy (x-ray, UV, visible, IR, and microwave), emission spectroscopy (arc and spark, flame and fluorescence), Raman spectroscopy, mass spectroscopy, and nuclear magnetic resonance spectroscopy. (Dept. AP, American Institute of Physics, 335 E. 45th St., New York, N. Y. 10017)

BROOKS INSTRUMENT has issued a new 40-page catalog, "Laboratory Buyer's Guide to Flow Measurement and Control Instruments." (Brooks Instrument, Division of Emerson Electric Co., Hatfield, Pa.; in Canada, Brooks Instrument Canada Ltd., 32A Howden Rd., Scarborough, Ont.)

PARR INSTRUMENT Co., INC., has a new 4-page bulletin describing bomb combustion equipment for burning solid and liquid samples in oxygen to analyze for sulfur, halogens and other elements. (211 53rd St., Moline, Ill. 61265)

ST. JOSEPH LEAD Co. has made available reprints of an 8-page article entitled "Zinc Chemicals in Plastics Systems," prepared by the International Lead Zinc Research Organization, Inc. Authors J. G. Bilek, Valerie Kollonitsch and C. H. Kline describe applications using zinc chemicals as activators, catalysts, stabilizers, fillers, pigments, lubricants, fungistats, dyeing aids and, in a few experimental polymers, as part of the polymer structure. Included are 203 references used to prepare the article. (St. Joseph Lead Co., Zinc Oxide Div., 250 Park Ave., New York, N. Y. 10017)

E-C APPARATUS CORPORATION has issued the third in a series of bibliographies covering the entire range of low molecular weight materials subject to separation by counter-current distribution. (Technical Bulletin no. 115, E-C Apparatus Corp., 222 S. 40th St., Phila., Pa. 19104)

HEWLETT-PACKARD has a new 42-page accessories catalog with analytical GC, preparative GC, CHN analysis and molecular weight measurement sections. Included is information on columns, column materials, sampling systems, temperature controllers, recorders and other equipment for the analytical laboratory. The company reminds readers that their bimonthly bulletin "Facts and Methods" is available upon request. The October issue featured linearity and sensitivity of GC systems. (F&M Scientific Div. of H-P, Avondale, Pa. 19311)

The nation's most far-reaching water pollution control bill—authorizing approximately \$3.6 billion to clean up U. S. waterways—was passed by the House and Senate Oct. 17 and sent to the White House for the President's signature.

As of Nov. 1, 1966, THE SOAP AND DETERGENT ASSOCIATION occupies a new office at 485 Madison Avenue, New York, New York 10022.

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The hydroxy acids are made directly from the corresponding nonhydroxy acids, saturated, unsaturated, and odd-numbered. All the hydroxy acids undergo oxidative decarboxylation to yield fatty acids containing one less carbon atom. The odd-numbered acids are also made from propionate, which is elongated to intermediate length acids and then to longer acids. The major intermediate length "primer" acid seems to be palmitate, but there is evidence that the stearate used for cerebroside synthesis is also made *de novo* from acetate. The ganglioside fatty acids were found to turn over somewhat faster than the other fatty acids. Two metabolic pools for the cerebroside acids were found, one with a very high turnover rate, the other with a very low turnover rate.

ANTIGENIC PROPERTIES OF A SYNTHETIC PROTEIN COMPLEX WITH GLYCOLIPIDS AND RELATED SUBSTANCES. Tamotsu Taketomi and Tamio Yamakawa (Dept. of Chem., Inst. for Infectious Diseases, Univ. of Tokyo, Tokyo, Japan). *Lipids* 1, 31-40 (1966). Erythro-sphingosine was obtained from sphingomyelin by alkaline hydrolysis. N-p-nitrobenzoyl-sphingosine, N-p-aminobenzoyl-dihydrosphingosine and dihydrosphingosine-protein were synthesized. It was found that dihydrosphingosine-protein can produce a specific antibody which can be detected by the complement fixation test and by Ouchterlony's double diffusion method in agar. The determining factor of dihydrosphingosine may be due to the hydroxy groups at C₁ and C₂. In the course of experimental allergic encephalomyelitis, the cross-reactivity of rabbit antisera against spinal cord, and with psychosine-protein in particular, was observed by the complement fixation test and by the Arthus reaction.

THE ISOLATION AND PARTIAL CHARACTERIZATION OF GANGLIOSIDES AND CERAMIDE POLYHEXOSIDES FROM THE LENS OF THE HUMAN EYE. G. L. Feldman, L. S. Feldman (Baylor Univ. College of Med., Houston, Texas) and G. Rouser. *Lipids* 1, 21-26 (1966). The first isolation of glycolipids from the lens of the human eye is described. Neutral (ceramide polyhexosides) and acidic (gangliosides) glycolipids were separated by column chromatography and further resolved by thin-layer chromatography. The components were methanolized, converted to trimethyl silyl ethers and the ratios of the components determined. Two types of monosialogangliosides were found. The most abundant ganglioside contained long chain base/fatty acid/glucose/galactose/neuraminic acid in the ratio 1/1/1/2/1. The ratio of components of the minor ganglioside fraction was 1/1/1/1/1. Dihydrosphingosine was the major base and the major fatty acids were palmitate and nervonate. The ceramide polyhexosides all had a glucose/galactose molar ratio of 1/1 and the mixture of ceramide polyhexosides had a dihydrosphingosine/sphingosine molar ratio of 7.85. The fatty acids ranged from C₁₀ to C₂₆ with both odd and even carbon chains and were saturated or monounsaturated with palmitate, oleate, and nervonate predominating.

PREPARATION AND PROPERTIES OF VARIOUS SALT FORMS OF PLANT PHOSPHATIDYL INOSITOLS. H. E. Carter and Evelyn J. Weber (Noyes Lab. of Chem., Univ. of Illinois, Urbana, Ill.). *Lipids* 1, 16-20 (1966). The Ca and Mg content of flax and corn phosphatidyl inositol fractions has been determined. Procedures were devised to prepare various salt forms of phosphatidyl inositol. The divalent cations were exchanged for monovalent ions (Na or K) on chelating resin columns. With the Folch wash procedure the Na or K forms of phosphatidyl inositol were completely converted to the Ca form. The nature of the metal ion associated with the phosphatidyl inositol had a striking influence on the solubility properties of the lipid. The differences in mobility on silicic acid columns of the various salt forms were utilized to free the phosphatidyl inositol from nitrogenous contaminants.

SERUM CHOLESTEROL AND PHYSICAL CHARACTERISTICS OF PRE-ADOLESCENTS AND ADOLESCENTS. C. Ann Milligan, Ethelwyn B. Wilcox, and Leora S. Galloway (Utah State Univ., Logan). *J. Am. Dietet. Assoc.* 49, 309-15 (1966). For 7 years, 152 girls and 169 boys were studied to determine interrelationships among serum cholesterol, hemoglobin, body build, weight, age, and sex. Serum cholesterol values for siblings in 62 families were also compared. Girls had significantly higher serum cholesterol levels (51.6 mg. free and 187 mg. total per 100 ml) than boys (48.9 and 178 mg, respectively). A slight elevation in serum cholesterol was observed in persistently overweight girls; no change was observed in boys of different body builds. A parallel relationships of hemoglobin and cholesterol was not shown. Brothers and sister of subjects with serum cholesterol levels of 200 mg/100 ml or over had higher values than did siblings of subject with values of 200 mg/100 ml or lower.