

PERKIN-ELMER has a new 20-page brochure, L-30, describing two low-cost infrared spectrophotometers. Specifications of the instruments, Perkin-Elmer Models 237B and 337, are detailed with illustrated examples of instrument resolution, range and speed. (Instrument Group, Perkin-Elmer Corporation, Main Avenue, Norwalk, Connecticut.)

T. SHRIVER & COMPANY, INC., is issuing their revised catalogue on filter presses and "ALP" power-actuated filters. It includes data for determination of filtration requirements and step-by-step guides for the selection of the right type and size of filter. (892 Hamilton St., Harrison, N.J.)

EMERY INDUSTRIES, INC., has prepared Bulletin No. 600A, describing 3101-D Isostearic Acid, a unique liquid isomer of stearic acid which combines the saturation of stearic acid with the liquid nature and solubility characteristics of oleic acid. (4400 Carew Tower, Cincinnati, Ohio 45202.)

F & M SCIENTIFIC CORPORATION has an 8-page bulletin describing the standard line of F&M columns and column accessories. (Route 41 & Starr Road, Avondale, Pa. 19311.)

E. H. SARGENT & Co., has released a bulletin on the Sargent Recording pH State, which is used in both research and routine studies of reaction kinetics and stoichiometry recording of reaction curves under closely controlled conditions of temperature, mixing and pH. (Department pHs, 4647 West Foster Ave., Chicago, Ill. 60630.)

PARR INSTRUMENT Co., INC., has presented a new Pressure Reactor Catalog, No. 65-2 illustrating their bench scale pressure reactors, hydrogenation apparatus, general purpose bombs and pressure vessels. (221 Fifty-third St., Moline, Ill. 61265.)

WILKENS INSTRUMENT AND RESEARCH, INC., lists a series of gas chromatograph presentations on gas chromatography, including a 12-page bulletin, W-117, "Chromatographic Techniques for Simulated Distillation." (P. O. Box 313, Walnut Creek, Calif.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS, has available their 1964 ASTM Proceedings, Volume 64. This 1200-page book includes technical papers on fatigue, metals, concrete, soils, road and paving materials and general testing. (Price prepaid, \$12; to ASTM members, \$8. ASTM, 1916 Race Street, Philadelphia, Pa. 19103.)

T. SHRIVER & COMPANY, INC., has available a 24-page illustrated catalogue, No. 65, presenting information on products and applications of filter presses and "ALP" pressure filters. (810 Hamilton Street, Harrison, New Jersey.)

BIO-RAD LABORATORIES have published Price List Q, "Materials for Ion Exchange Adsorption Gel Filtration," a 46-page indexed catalogue. (32nd & Griffin Avenue, Richmond, Calif.)

E-C APPARATUS CORPORATION, have available technical bulletins describing recovery of individual protein zones from acrylamide gel electrophoresis separations, in the preparation of pure proteins. Albumin, lactic dehydrogenase, haemoglobin and prealbumin globulins are some of the protein variants recently isolated successfully by Elution Convection. (226 S. 40th St., Philadelphia, Pa. 19104.)

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THE ISOLATION OF COPROSTANOL FROM STEROL ESTERS OF HUMAN FECES. R. S. Rosenfeld (Montefiore Hospital, Bronx). *Arch. Biochem. Biophys.* 108, 384-5 (1964). Coprostanol has been isolated as the main sterol in the nonsaponifiable fraction of fecal sterol esters in 5 subjects. Coprostanol esters are probably formed either by microbiological reduction of cholesterol prior to esterification or by reduction of cholesterol esters.

THE ORIGIN AND FUNCTION OF SOME METHYL GROUPS IN BRANCHED-CHAIN FATTY ACIDS, PLANT STEROLS AND QUINONES. E. Lederer (Inst. de Chimie des Substances Naturelles, C.N.R.S.). *Biochem. J.* 93, 449-68 (1964). This is a review with about 150 references discussing 1) the various ways invented by living cells for producing methyl-branched fatty acids, 2) the origin of the "extra methyl group" of the C₂₂ and C₂₄ sterols (e.g. ergosterol, β -sitosterol), and 3) the biological function of the methyl side chain of vitamin K and the ubiquinones. Four different mechanisms that can lead to methyl-branched fatty acids are known, the first two being the most prevalent: 1) C-methylation with the participation of methionine; 2) incorporation of propionic acid; 3) incorporation of the branched chains of leucine and isoleucine, leading to the iso and anteiso acids, respectively; 4) incorporation of mevalonic acid. In the C-methylation leading to tuberculostearic acid and to ergosterol, only two of the three hydrogen atoms of the methyl group of methionine are transferred. Both of the carbon atoms of the ethyl side chain of the C₂₂ phytosterols come from methionine. An essential function is suggested for the methyl side chain of vitamin K and the ubiquinones in oxidative phosphorylation and perhaps in other biological reactions such as a catalyst for prothrombin synthesis.

STUDIES ON ESSENTIAL FATTY ACID DEFICIENCY. EFFECT OF THE DEFICIENCY ON THE LIPIDS IN VARIOUS RAT TISSUES AND THE INFLUENCE OF DIETARY SUPPLEMENTATION WITH ESSENTIAL FATTY ACIDS ON DEFICIENT RATS. L. A. Biran, W. Bartley, C. W. Carter and A. Renshaw (Univ. of Oxford). *Biochem. J.* 93, 492-8 (1964). EFA-deficient diets resulted in marked changes in constituent fatty acids of the nitrogenous-phospholipid and cardiolipin fractions of heart, kidney, liver and skin. In the nitrogenous-phospholipid fraction, there was a replacement of arachidonic acid and linoleic acids by palmitoleic acid, oleic acid and eicosatrienoic acids. In the cardiolipin fraction, where linoleic acid is normally the predominant unsaturated fatty acid, dietary deficiency resulted in replacement of this acid and to a lesser extent of arachidonic acid by palmitoleic, oleic and eicosatrienoic acids. In the brain, where the normal concentration of linoleic acid is low, little change was observed in the deficient rats in the amount of linoleic or arachidonic acid. EFA-deficient diets caused a decrease in the proportion of linoleic acid and a rise in those of palmitoleic, oleic and eicosatrienoic acids in the neutral lipid fractions of heart, kidney and liver. The concentration of arachidonic acid, which is low in the neutral lipids of most normal tissues except brain, was little changed as a result of dietary deficiency. Dietary supplementation of animals with corn oil (equivalent to 200 mg of linoleic acid) over a period of 16 days reversed the changes induced by deficiency in the fatty acid constituents of the neutral lipid, nitrogenous phospholipid and cardiolipin fractions of heart, kidney and liver.

CAN CHANGES IN THE AMERICAN DIET PREVENT CORONARY HEART DISEASE? S. Dayton, M. L. Pearce, and Elva Hiscock (Veterans Administration Center, Los Angeles). *J. Am. Dietet. Assoc.* 46, 20-5 (1965). This is an interim report of a study begun in 1959 to determine the possible usefulness of a diet high in unsaturated fat. Although data on morbidity and mortality are still too meager to permit conclusions as to the effectiveness of the experimental diet, considerable information on the metabolic effects of such a diet has been acquired and is described. Thus far the study has shown: the long-term acceptability of a diet containing predominantly unsaturated fat; serum cholesterol decrements induced by such a diet (16% of baseline values) are maintained for at least 52 months; fatty acid composition of adipose tissue and atheromata slowly changes in the direction of the composition of the dietary fat; for periods up to 5 years, the diet is without apparent harmful effects. There is no evidence of vitamin E inadequacy.

DIET AND CARDIOVASCULAR DISEASE. Margaret J. Albrink (West Virginia University). *J. Am. Dietet. Assoc.* 46, 26-9 (1965). A review of the dietary habits of mankind and the changes in these habits suggests that an increase in total calories rather than of dietary fat coincides with the increase in atherosclerotic vascular disease in affluent countries. Serum triglycerides, unlike serum cholesterol, are associated with various measures of body fatness and may thus be used to test the importance of caloric excess in the pathogenesis of coronary