
Publications

Book reviews

Advances in Nutritional Research, Vol. 3, edited by H.H. Draper (Plenum Press, 227 W. 17th St., New York, NY 10011, 1980, 362 pp., \$32.50).

The third volume of this new series largely continues to meet the standards set in Volumes 1 and 2. Included are chapters on: lipid metabolism and ischemic heart disease in Greenland eskimos; trace element deficiencies in man; current concepts of intravenous hyperalimentation; dietary influences on prostaglandin synthesis; stable isotopes for bioavailability assessment of dietary minerals in humans; evidence of the essentiality of arsenic, nickel and vanadium and their possible nutritional significance; protein in the nutrition of the preterm infant; metabolism of long-chain monoenoic fatty acids in heart muscle and their cardiopathogenic implications; the biology of taurine in nutrition and development; and trichothecene mycotoxins—mycology, chemistry and toxicology. At least 4 or 5 of these chapters should be of interest to the lipid chemist.

Some reservations should be noted regarding 2 of the chapters. If the reader is willing to believe that there are not or never have been problems with lipids in parenteral nutrition as would seem to be indicated by the coverage of this topic provided by Deitel and MacDonald — so be it. Failure to even mention the previous FDA action in this area is really putting the past behind oneself. Sauer and Kramer are particularly well qualified to write on the erucic acid/rapeseed oil dilemma, having published extensively in this area. It should be realized, however, that they have historically vigorously and ably represented one side of an extremely controversial topic right from within a Canadian government laboratory, and that the Canadian government has adopted a position, the rationale of which is not acceptable to all scientists. The general tenor of the chapter may be judged from the title, and the observation that, in the first 5-3/4 pages, the words "erucic acid" occur only once, whereas marine or fish oils are referred to an even dozen times. The work with eskimos represents 3 expeditions to Greenland by the authors, Bang and Dyeberg, between 1970 and 1978. These investigators seem particularly impressed with the eicosapentaenoic acid levels induced by ingestion of marine lipids. The increase in 20:5 and corresponding decrease in 20:4 is considered to shift the balance between pro- and antiaggregatory prostaglandins toward anti-aggregation with a reduction in thrombus formation and the incidence of ischemic heart disease. This relationship is also discussed by Galli in the chapter on prostaglandins. The trichothecene mycotoxins are known to occur in corn, barley, and rye in the U.S. but appear to be a greater problem in Russia and Japan. Much of the coverage is devoted to chemistry, mycology and assay methods. This chapter seems particularly timely in view of the recent interest in "yellow rain" in southeast Asia. The availability and utility

of stable isotopes in various types of analyses is receiving considerable attention in several areas, including nutrition.

This is an excellent series and this particular volume has a high percentage of material of interest to the lipid chemists or biochemist.

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Toxic Constituents of Plant Foodstuffs, 2nd Edn., edited by I.E. Leiner (Academic Press, Inc., 111 5th Ave., New York, NY, 1980, 502 pp., \$39.50).

An updated second edition of this worthwhile book which first appeared over 10 years ago is a welcome addition to a food science library. Information concerning food toxicology and the physiological effects of food components and toxins has greatly increased in the last decade. There are chapters dealing with protease inhibitors, hemagglutinins (lectins), glucosinolates, cyanogens, saponins, gossypol, lathrogens, favism, allergens, naturally occurring carcinogens, toxic factors induced by food processing, and a final chapter concerning miscellaneous toxic factors. This last chapter discusses the toxic effects of Maillard reaction products and lipids. Each chapter is preceded by a contents listing and the index is comprehensive. This book is a valuable addition to the library of those interested and working in the area of formulating plant foodstuffs.

The Vocabulary of Organic Chemistry, by M. Orchin, F. Kaplan, R.S. Macomber, R.M. Wilson and H. Zimmer (John Wiley & Sons, New York, NY, 1980, 609 pp., \$35).

The intent of this volume is to present the basic concepts and vocabulary currently in use in organic chemistry. Many illustrations and examples are used to explain the terms defined. The advances made in the field of organic chemistry within the last decade have been tremendous. It is difficult for anyone other than a practicing organic chemist to keep up-to-date with the new reactions and concepts that are continuously appearing. I'm sure that the diligent practicing organic chemist also finds this difficult. It is even more so for the many scientists who, although they are not organic chemists, use the science extensively. For those persons, as well, the availability of a book such as this volume is essential and fills a void. Such a book cannot be intensively reviewed in the present circumstances; however, perusal indicated that the explanations are clear and concise. The liberal use of structural formulae and reactions is essential. The name reactions are well illustrated and literature citations are provided for further information. The index appears comprehensive but, in a book of this type, the organization and ease of finding material is of major value. I would recommend that this volume be on the personal shelves of scientists requiring ready access to current

vocabulary, definitions, name reactions and concepts of organic chemistry.

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New publications

Cholesterol Autoxidation, by Leland L. Smith, Plenum Publishing Corp., 233 Spring St., New York, NY 10013, 1981, 692 pp., \$75.

Nutritional Pharmacology, edited by Gene A. Spiller, Alan R. Liss Inc., 150 Fifth Ave., New York, NY 10011, 1981, 268 pp., \$40.

Nutrition and Child Health: Perspectives for the 1980s, edited by Reginald C. Tsang and Buford Lee Nichols, Alan R. Liss Inc., 150 Fifth Ave., New York, NY 10011, 238 pp., \$22.

Patty's Industrial Hygiene and Toxicology, 3rd Revised Edn., Volume 2B: Toxicology, edited by George D. Clayton and Florence E. Clayton, John Wiley and Sons, 605 Third Ave., New York, NY 10158, 1981, 960 pp., \$70.

Foundations of Computer-Aided Chemical Processing Design, Volumes I and II, conference proceedings published by the American Institute of Chemical Engineers, 345 E. 47th St., New York, NY 10017, 1178 pp., \$40 members, \$50 others.

13th Survey of Portuguese Olive Oil, published by the Technical Studies Group of the Institute of Fat and Oil Products, Lisbon, Portugal, 1981, 45 pp.

Scanning Electron Microscopy, Inc. (SEM, Inc.), PO Box 66507, AMF O'Hare, Chicago, IL 60666, a nonprofit organization, will begin publishing **Food Microstructure**, an international journal covering the microstructure and microanalysis of foods, feeds and their ingredients, in 1982. The journal will include papers on the microscopy and microanalysis of fats and oils. Subscription cost is \$50 per year.

NSPA 1981-82 Yearbook and Trading Rules, published by the National Soybean Processors' Association, 1800 M St. NW, Washington, DC 20036, \$5 members, \$12 nonmembers.

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Latest in *Lipids*

Scheduled for DECEMBER

Components of Royal Jelly: I. Identification of the Organic Acids

Hypolipidemic Effects of Clofibrate and Selected Chroman Analogs in Fasted Rats: I. Chow-Fed Animals

Photosensitized Oxidation of Methyl Linoleate: Secondary and Volatile Thermal Decomposition Products

Studies of Biosynthesis of Waxes by Developing Jojoba Seed: III. Biosynthesis of Wax Esters from Acyl-CoA and Long Chain Alcohols

Intestinal Cholesterol Uptake from Phospholipid Vesicles and from Simple and Mixed Micelles

Mitochondrial Hydroxylation of the Cyclohexane Ring as a Result of β -Oxidation Blockade of a Cyclohexyl Substituted Fatty Acid

The Influence of *trans*-Acids on Desaturation and Elongation of Fatty Acids in Developing Brain

Fatty Acid Composition of Seed Oils from Six *Adansonia* Species with Particular Reference to Cyclopropane and Cyclopropene Acids

Identification of Arachidonic Acid in Gulf of Mexico Shrimp and Degree of Biosynthesis in *Penaeus setiferus*

In Vitro Conversion of Saturated to Monounsaturated Fatty Acid by Ehrlich Ascites Cells

Comparison of Phospholipid Profiles of Primary Adenocarcinoma in the Lung and Other Organs

Methods

High Performance Liquid Chromatography and Glass Capillary Chromatography of Geometric and Positional Isomers of Long Chain Monounsaturated Fatty Acids

Communications

Rapid Fractionation of Human High Density Apolipoproteins by High Performance Liquid Chromatography

Enzymatic Formation of Cholesteryl Ester from Cholesterol by Gallbladder Mucosa

Lethal Effect of *cis*- but not *trans*-22-Dehydrocholesterol on Mouse Fibroblast Cells

Exchange of Phosphatidylcholine between Rabbit Erythrocytes and Plasma in vivo

Effect of Buffer Constituents on Rat Liver 3-Hydroxy-3-methyl Glutaryl Coenzyme A Reductase

Distribution of Long Chain Polyenoic Acids among Phospholipids of Mouse Testis

An Improved Procedure for the Isolation of Ghost Membranes from Human Red Blood Cells

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