
Publications

Book reviews

Carcinogens and Related Substances, Analytical Chemistry for Toxicology Research, Malcolm C. Bowman (Marcel Dekker, Inc., 270 Madison Ave., New York, NY, 1979, 316 p., \$34.50).

In this day and age every industry seems to be embroiled in controversy regarding the carcinogenicity or mutagenicity of one chemical or another. Usually the controversy centers around experimental design and test methodology. This book is largely concerned with the analytical procedures relevant to such studies. The difficulties inherent in conducting a well controlled, definitive experiment in this area will become immediately apparent to the reader. The first chapter briefly considers analytical procedures related to animal studies. These include purity of starting material, stability in diet, quantitation of dose and transfer from the diet to the surrounding environment. Approximately twice as many pages are then spent on the deleterious materials, of sometimes ubiquitous distribution, which may adventitiously enter the experiment. The relevance of pesticide residues, PCB's, aflatoxins, diethylstilbestrol and certain heavy metals in the diet or pentachlorophenol in the bedding material should be obvious. Subsequent sections consider aromatic amines, estrogens, pesticides and the Ames test in detail with emphasis on detailed methods of sample preparation, clean-up, recovery studies and analytical methodology usually involving GC or HPLC. A chapter on analysis of waste water for 13 carcinogens may be of limited interest in the fat and oil industry.

This book has two points to recommend it. The author provides interesting descriptions of modern analytical methodology and conveys to the reader something about the presence of carcinogens in our environment.

Neurochemistry of Aminosugars—Neurochemistry and Neuropathology of the Complex Carbohydrates, E.G. Brunngraber (Charles C. Thomas, 301 E. Lawrence Ave., Springfield, IL, 1979, 701 p., \$34.75).

The title of this book and, for that matter, even the subtitle are somewhat misleading, since the subjects covered are gangliosides, glycosaminoglycans and glycoproteins. Approximately one-fourth of the book is devoted to gangliosides including chemistry, localization of gangliosides in neural tissue and the developing animal, function of the gangliosides, biosynthesis and catabolism of gangliosides, and gangliosides in neuropathological conditions. The approach taken may remind some of our older readers of Deuel's three volume series, "Lipids," published between 1951 and 1957. Coverage is encyclopedic with 7,000 cited references and a 40-page index. According to the author, the literature review is complete through late 1978. A 20-page addendum, subdivided by chapters, lists additional references which appeared too late for inclusion in the text. Since the actual text cites approximately 15 references per page, relatively little is said about any given paper and the

emphasis is definitely not on methodology. Based on a series of spot checks, the coverage appears to be very comprehensive.

A literature review of this magnitude does not make for light reading and at times is frustrating in the paucity of detail. However, it does provide instant access to the literature in a relatively broad area, with reasonable confidence that the citation sought will be present. This type of book remains useful for at least 5-10 years as opposed to 1-2 years for the typical symposium volume. Viewed this way the price is quite low. Although basically a reference work, this book should receive rather heavy use in biochemistry and neurochemistry laboratories.

Lloyd A. Witting
Supelco Inc.
Bellefonte, PA 16823

Organics Analysis Using Gas Chromatography-Mass Spectrometry—a technique and procedures manual, W.A. Budde and J.W. Eichelberger. (Ann Arbor Science Publishers Inc., PO Box 1425, Ann Arbor, MI 48106, 1979, 242 p., \$20.00).

This book is essentially a techniques manual revolving about the instruments used in the Environmental Protection Agency Laboratories, namely Finnigan mass spectrometer-gas chromatographs interfaced with the PDP data systems and associated software. Thus this volume will be of limited value to workers not having such specific instrumentation. However, many of the concepts illustrated by these chapters will be useful to owners of other types of GC-MS systems, especially the chapters concerning quality control of analyses, GC/MS sample preparation, compound identification and preventive maintenance. One of the most useful sections of the book is the selected bibliography of literature on GC/MS and related applications. This book will be of interest to those AOCS members involved in GC/MS analysis and specifically those involved in effluent analysis and other environmental analyses.

Recent Developments in Mass Spectrometry in Biochemistry and Medicine, Vol. 2., edited by A. Frigerio (Plenum Press, New York, 1979, 492 p., \$45.00).

This volume represents papers presented at the Fifth International Symposium on Mass Spectrometry in Biochemistry held during June 1978. The book contains 35 chapters, which cover a wide range of mass spectrometric applications; most of them deal with some aspect of drug metabolism. The chapters are interesting and reveal the use of many advanced analytical techniques. The book has a crisp appearance, is clearly typed and the figures and structures are well done. The index is not lengthy but

Continued on page 336A.

Publications

appears adequate. The book would be useful to those interested in the advanced analytical applications of mass spectrometry.

E.G. Perkins
 Department of Food Science
 University of Illinois
 Urbana, IL 61801

Nutrition and the Brain, Choline and Lecithin in Brain Disorders, Vol. 5, Edited by André Barbeau, John H. Growdon and Richard J. Wurtman (Raven Press, New York, NY, 1979, 456 p., \$42.00).

This volume deals with the use of dietary precursors to control the synthesis of neurotransmitters and specifically with the use of choline and lecithin to control acetylcholine synthesis. The first six contributions provide background information on acetylcholine synthesis and biochemistry. These are followed by papers on the measurement, sources and metabolism of choline and lecithin. The first half of the volume concludes with seven articles dealing with the anatomy, physiology and pharmacology of cholinergic neurons. On the whole this first part of the book is highly informative, the articles are well written and provide an excellent, up-to-date background on cholinergic systems.

The second part of the volume deals primarily with the use of choline and lecithin in movement disorders and in

memory and mood disorders. This section is somewhat disappointing. The prospect of controlling such disorders as Huntington's and Alzheimer's diseases, and tardive dyskinesia, by dietary means is so exciting that it comes as a letdown to find a collection of reports on clinical trials which employed small numbers of subjects and seldom used a double-blind design. Perhaps at this stage it would have been preferable to have one or two critical reviews of clinical findings and a summary of possible future approaches. Of course, it has to be recognized that this form of therapy is truly in its infancy and for this reason the editors perhaps felt as much clinical data as possible should be documented. This reviewer, however, was somewhat disillusioned by the poor design of several trials. Several reports do seem sufficiently encouraging to warrant larger, double-blind trails and hopefully a later volume will report some definitive studies which will indicate whether or not the dietary control of neurotransmitter synthesis has a future in neurology. Setting aside the premature publication of much of the clinical data, this book is worth purchasing for the background information to this innovative therapeutic approach. It will be of special interest to lipid biochemists and manufacturers of "lecithins" for human consumption. In this connection it was gratifying to

Continued on page 338A.

NEED IDEAS

HEAVY DUTY MOTORS -
DUAL DRIVE SYSTEM

HOW ABOUT THIS EDIBLE FAT
CHILLER FOR STARTERS?

OVERALL
HEIGHT
1625 mm

3 INDEPENDENT SYSTEMS IN 1

1829 mm

1550 mm

3 or 1 = FLEXIBILITY

EDMUNDS		SCRAPED SURFACE HEAT EXCHANGERS	
MACHINE COMPANY		MARGARINE & BUTTER CHIP MACHINES	
DESIGNERS / FABRICATORS		PASTRY MARGARINE SHEETERS & WRAPPERS	
P.O. Box 17526		FRYING SHORTENING SHEETERS & WRAPPERS	
TELEX 767416		VISCIOUS LIQUID FILLERS	
SAN ANTONIO, TEXAS		DRAWN BY	DATE
		2/12/80	APPROVED BY
		RE	PART NO.
			C 1 SOON

Publications

find that the appendix provides guidelines for nomenclature and methodology of "lecithins" since some preparations presently available contain as little as 20% phosphatidylcholine.

Patricia V. Johnston
Department of Food Science
University of Illinois, Urbana-Champaign

New publications

The Forest Products Laboratory has prepared a listing of its publications on conifer extractives, naval stores and tall oil. Copies may be obtained from the Director, Forest Products Laboratory, Forest Service, USDA, PO Box 5130, Madison, WI 53705.

The Federation of Societies for Coatings Technology has released **An Infrared Spectroscopy Atlas**, a revised and expanded book containing a compilation of 1,433 spectra, fully indexed, of materials used in the coating industry. Chapters cover theory, qualitative and quantitative analysis, instrumentation, IR instrumentation accessories, sample preparation and applications. The price for federation members is \$75, for nonmembers, \$100. For an order form, write to the Federation of Societies for Coatings Technology, 1315 Walnut St., Suite 830, Philadelphia, PA 19107.

Aquatic Toxicology, a collection of 25 papers published by the American Society for Testing and Materials (ASTM), covers the assessment of the effects of contaminants in the aquatic environment. Subject areas include: applications and principles of physiological toxicology—a report on progress in the roots of toxicology; toxicological methodology and data, including new methods; bioaccumulation of aquatic contaminants; and the fate of chemicals in the environment. For your copy, write: ASTM, 1916 Race St., Philadelphia, PA 19103.

A new volume of Infrared Grating Reference Spectra has been published in the Sadtler Research Laboratories 22-volume collection, **Surface Active Agents**. The new volume includes spectra of commercially available products used as defoamers, detergents, emulsifiers, sequestering agents, soaps and softeners. Products are indexed by trade name and chemical type. For more information, write to Sadtler Research Laboratories, 3316 Spring Garden St., Philadelphia, PA 19104.

Environmental Contaminants in Food, a report published by the U.S. Congress Office of Technology Assessment, address the problem of organic chemicals, metals and their derivatives, and radioactive substances that inadvertently enter the human food supply through agriculture, mining, industrial operations or energy production. Copies are available for \$5.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For a free summary of the report, write: Office of Technology Assessment, U.S. Congress, Washington, DC 20510.

The 1979/1980 edition **S.I.C. Buyers Guide**, directory of 3,300 suppliers to the food processing and beverage indus-

tries, is now available. The guide is divided into sections including ingredients, processing, packaging, material handling and sanitation equipment, process controls and laboratory supplies. Single copies are \$15, with discounts for multiple copies, from S.I.C. Publishing Co., PO Box 6042, Lawrenceville, NJ 08648.

The Engineers Joint Council has released the ninth edition of the **Directory of Engineering Societies**. The publication contains data on 460 nonprofit engineering organizations throughout the world, including the names of each organization; its official abbreviation; address and phone number; names of the principal officers, editor-in-chief and elected officers; founding date; size of staff, membership, annual budget; the organization's objectives and membership requirements or qualifications. Price is \$23.00 prepaid, from the Engineers Joint Council, Dept. DPR, 345 East 47th St., New York, NY 10017.

The Soap and Detergent Association has published **A Systematic Comparison of Chemically Induced Eye Injury in the Albino Rabbit and Rhesus Monkey**, which may interest toxicologists and other scientists concerned with chemical insult to the eye. The book presents the unabridged results of a study illustrating important differences between rabbit and primate eyes in response to chemical irritants. In addition, it shows that time and the reversibility of lesions must be considered when evaluating the irritancy of materials. Chemical materials used in the study, principally soap, synthetic surfactants and alkaline salts, were selected as representative of materials known to have been introduced accidentally or deliberately into human eyes and as presenting varying degrees of hazard. The book, containing 600 black-and-white photographs, as well as extensive data, is available for \$150 from The Soap and Detergent Association, 475 Park Avenue South, New York, NY 10016. □

AOCS needs copies of LIPIDS, volume 12 (1977), January and February.

The society will pay \$1.50 for each copy received in reusable condition. Send copies to AOCS, 508 South Sixth Street, Champaign, IL 61820.