

Method development update

Technical committees

It has been requested that the complete list of AOCS technical committees with chairpersons, company and a phone contact, be published. The list of current AOCS technical committees is as follows:

- AOM Alternative Committee, Mark Matlock, ADM (Decatur), chairman, telephone 217-424-2460.
- Bleaching Methods Committee, Raymond Coleman, United Catalyst, chairman, telephone 502-637-9751.
- Chromatography Committee, John Callahan, Colgate-Palmolive, chairman, telephone 201-878-7671.
- Commercial Edible Fats and Oils Committee, Ron Sleeter, ADM (Decatur), chairman, telephone 217-424-2466.
- Fatty Acids and Derivatives Committee, Gerald Szajer, Akzo Chemie, chairman, telephone 312-442-7100. This committee formerly was the Industrial Oils and Derivatives Analysis Committee.
- Flavor Quality and Stability Committee, Jeremiah Roberts, Best Foods, chairman, telephone 201-688-9000. This committee formerly was the Flavor Nomenclature and Standards Committee.
- Jojoba Analysis Committee, Frank Flider, JMC Technologies, chairman, telephone 602-

996-1701. This committee formerly was the Jojoba Seed and Oil Standards Committee.

- Lecithin and Co-Products Committee, Bernard Szuhaj, Central Soya, chairman, telephone 219-425-5100.
- Mycotoxin Committee, Art Walkling, Best Foods, chairman, telephone 201-688-9000.
- Nuclear Magnetic Resonance (NMR) Committee, Bryan Madison, Procter & Gamble, chairman, telephone 513-659-7437.
- Seed and Meal Analysis Committee, Chair vacant.
- Soap and Synthetic Detergents Analysis Committee, George Battaglini, Stepan Chemical, chairman, telephone 312-446-7500.
- Tocopherols in Deodorizer Distillates, Charles Marx, DPI Division of Eastman Kodak, chairman, telephone 716-588-4517.
- Trace Metals Analysis Committee, Howard Robinson, Lever Research, chairman, telephone 201-943-7100. This committee formerly was the Atomic Absorption Spectroscopy Committee.

At the Uniform Methods Committee (UMC) meeting in New Orleans on May 20, 1987, all subcommittees were eliminated and combined with the parent committee. Several committees

changed their names to better reflect their activities. The former subcommittee chairmen now are project coordinators. The Automated Color in Oils Analysis Committee now is a project of the Commercial Edible Fats and Oils Committee, with Michael Erickson of Interstate Foods as project coordinator.

Dilatometer calibration

Kontes Glass Co., Vineland, New Jersey, supplier of dilatometers for Solid Fat Index (AOCS Official Method Cd 10-57), indicates that new dilatometers can be supplied with a certificate of calibration. There will be a charge for the calibration. The optional calibration is being offered by Kontes Glass Co. in response to requests for the service due to concerns about mercury calibration of dilatometers in laboratories located in food companies. Anyone interested in the service should contact Kontes Glass Co. directly.

Solvent toxicity

Art Hazards News 10(1):4(1987), notes that 1,1,1-trichloroethane has been known to cause cardiac-related sudden deaths. Apparently even low-level exposures can affect heart rhythms. The *Art Hazards News* article further notes that monitoring is urged for persons continually occupationally exposed to this widely used commercial solvent.

Publications

Book reviews

How to Find Chemical Information, A Guide for Practicing Chemists, Educators and Students, 2nd Edition, by Robert E. Maizell (John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1987, 402 pp., \$44.95).

This book presents a practical approach to information searching. The reader is shown in a step-by-

step manner how to develop a search strategy and how to implement the strategy using such tools as *Chemical Abstracts*, encyclopedias, handbooks and the numerous on-line computer retrieval systems. The book focuses on the development of a solid foundation for evaluating future changes and developments in a given field.

There are 19 chapters. Each chapter is well written and is in an easy to read style. Specific chap-

ters deal with keeping up-to-date; how to get access to the literature, complete with names, addresses and phone numbers, *Chemical Abstracts* and other abstracting services, and on-line services; how to use them; as well as an outstanding chapter on patent searching. This book is highly recommended for anyone doing literature searching, from the first-timer to the professional.

This book belongs in every technical library. A paperback

version at a lower cost would find its way into my own personal library.

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Lipid Oxidation: Biological and Food Chemical Aspects (Proceedings Lipidforum/SIK Symposium April 22-23, 1985), edited by Reinhard Marcuse (Scandinavian Forum for Lipid Research and Technology, Box 5041, S-402 29, Göteborg Sweden, 1986, 206 pp., \$35).

The publications of the Lipidforum group are always of interest because they represent research reports primarily from Europe and Scandinavia which are not readily available in the U.S. This particular volume contains papers covering the area of oxidation mechanisms, analytical methodology, cholesterol oxidation, lipid oxidation in feed, and a section dealing with protection against lipid oxidation. Of particular interest are chapters dealing with chemiluminescence, a comparison of methods for quality control of frying fats, and superoxide dismutase as a potential food antioxidant. This volume is recommended for those who wish to keep abreast of lipid oxidation research.

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Seafoods and Fish Oils in Human Health and Disease, Technology Series No. 23, by John E. Kinsella (Marcel Dekker, 270 Madison Ave., New York, NY 10016, 1987, 317 pp., US and Canada \$99.75, elsewhere \$119.50).

In this volume, Kinsella reviews specific information on the effects of fish and fish oils on lipid metabolism in relation to certain public health problems. He also discusses sources, availability, processing and safety of fish oils and presents the characteristics of some fish and fatty acid contents of common edible species.

The first chapter, dealing with dietary fats and cardiovascular disease, includes discussions of risk factors, plasma lipid changes associated with diets rich in cholesterol and saturated fats, and those rich in polyunsaturated fatty acids (PUFA). It also deals with dietary fat and platelet function, essential fatty acids, and studies on Greenland Eskimos and other populations. The second chapter gives general background and an overview of eicosanoid metabolism.

The third chapter is very useful in bringing together many of the effects of omega-3 fatty acid consumption on the plasma, platelet, vessel wall and erythrocyte characteristics of human subjects in feeding trials. The following chapter deals with the effects of dietary omega-3 PUFAs of fish oils on serum lipids, eicosanoids and thrombotic events seen in animal feeding trials. There have been many omega-3 fatty acid feeding trials in both humans and animals in the last few years, and it is useful to have them brought together in one volume.

Chapter 5, a brief account of PUFA and cancer, emphasizes studies of the effect of omega-3 fatty acids. The next chapter gives some calculations of fish and omega-3 PUFA consumption in the U.S., and Chapter 7 deals with the cholesterol and fat-soluble vitamins in fish lipids. Components affecting the safety of fish oils is the subject of Chapter 8, while edible fish oil processing and technology is discussed in Chapter 9. In the next chapter, Kinsella summarizes the health implications of dietary fish and fish oils and research needs. The book ends with a listing of all fatty fish that inhabit U.S. waters.

This volume is very useful as a reference to the numerous studies on fish, fish oils and health and to potential sources of fish oil. While the reviews of human and animal studies are not particularly critical, the author does include some cautionary notes in the discussions regarding inappropriate experimental design and lack of proper controls in many studies. All those interested in fish oils and omega-3 fatty acids in general will find this

book useful. It is unfortunate that the price is so high.

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Non-Traditional Oilseeds and Oils of India, edited by N.V. Bringi (Oxford & IBH Publishing Co. Pvt. Ltd., 66 Janpath, New Delhi, India 110 001, 1987, 254 pp., \$10).

This book consists of 10 chapters covering important non-traditional oilseeds of India. The main task of the editor has been to collate all widespread information concerning these oilseeds, together with the results of his own laboratory.

Approximately one-third of the book (the first four chapters) describes in detail the chemistry and the botany of six important symmetrical triglyceride-containing fats—sal, mowrah, mango kernel, kokum, dhupa and phulwara. The following three chapters deal with the chemistry and processing of oils from neem, karanja and kusum for industrial applications. The chemistry and industrial usage of the minor components of these oils have been treated in depth. The last three chapters deal with lesser-known oilseeds and their potential industrial development.

This book is a fairly comprehensive review of non-traditional oilseeds in India. One major limitation is the absence of the application of modern analytical techniques for evaluation of these oilseeds. The organization of the book makes it very easy to use as a quick reference for scientists and technologists involved in the field of oils, fats and oleochemicals.

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New books

Palm Oil, Critical Reports on Applied Chemistry, Vol. 15, edited by F.D. Gunstone, published for the Society of Chemical Industry by John Wiley & Sons Inc., 605 Third

Publications

Ave., New York, NY 10158, 1987, 100 pp., \$59.95.

Liposomes: From Biophysics to Therapeutics, edited by Marc J. Ostro, Marcel Dekker Inc., 270 Madison Ave., New York, NY 10016, 1987, 393 pp., \$85 US and Canada, \$102 elsewhere.

Corn: Chemistry and Technology, edited by Stanley A. Watson and Paul E. Ramstad, American Association of Cereal Chemists, 3340 Pilot Knob Road, St. Paul, MN 55121, 1987, 605 pp., \$87 US and Canada, \$95.70 elsewhere.

Lipids in Modern Nutrition, (Nestlé Nutrition Workshope Series, Vol. 13), edited by Marc Horisberger and Umberto

Bracco, Raven Press, 1185 Avenue of the Americas, New York, NY 10036, 1987, 266 pp., \$29.50.

Thin Layer Chromatography, by Richard J. Hamilton and Sheila Hamilton, published for Analytical Chemistry by Open Learning by John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1987, 129 pp., \$19.95.

Hazardous Chemicals Desk Reference, by N. Irving Sax and Richard J. Lewis, Sr., Van Nostrand Reinhold, 115 Fifth Ave., New York, NY 10003, 1987, 1000 pp., \$69.95.

A Handbook of Introductory Statistical Methods, by C. Philip Cox, John Wiley & Sons Inc., 605

Third Ave., New York, NY 10158, 1987, 288 pp., \$34.95.

The following books are available from Academic Press Inc., 6277 Sea Harbor Drive, Orlando, FL 32887.

Autoxidation of Unsaturated Lipids, Food Science and Technology: A Series of Monographs, edited by H.W.S. Chan, 1987, 296 pp., \$63.50.

The Biochemistry of Plants: A Comprehensive Treatise, Vol. 9 of Lipids: Structure and Function, edited by P.K. Stumpf, 1987, 336 pp., \$65.

Nutritional Toxicology Vol. II, edited by John N. Hathcock, 1987, 288 pp., \$65.

New Products

CALIBRATOR

Techne Inc. has available an electronic portable calibrator for thermal sensors. The model DB-700A can be used in the calibration lab and for on-site measurement, and its aluminum bronze well is designed to maintain uniform temperature up to 700 C. Contact: Techne Inc., 3700 Brunswick Pike, Princeton, NJ 08540.

SPECTROCOLORIMETER

The ColorQuest spectrophotometer's optical sensor features a 45 degree illumination/0 degree viewing geometry which can be tailored to meet specific industrial requirements. The system also includes quality control software in IBM or IBM-compatible computers, color scales and indices, and data storage for samples, standards and tolerances. Contact: HunterLab, Hunter Associates Laboratory Inc., 11491 Sunset Hills Road, Reston, VA 22090-5280.

IR SENSOR

The MoistArt Micro 5500 infrared sensor by the Ohmart Corp. measures moisture in bulk process materials. It can be used continu-

ously on-line or off-line in laboratory applications, and its cast aluminum housing allows its use in many food and chemical processing applications. When used in conjunction with the company's microprocessors, inputs from single and multiple sensors can be measured. Contact: Ohmart Corp., 4241 Allendorf Dr., Cincinnati, OH 45209.

CONTROL SYSTEM

The production management system (PMS) by Apache Control Systems is designed for beverage filling lines. The computer-based monitoring and data-logging system collects production counts, spoilage and downtime data, then the data is converted to provide real-time on-line monitoring. Contact: Apache Control Systems, 1805 W. County Rd. C., St. Paul, MN 55113.

ANALYZERS

FIATron Systems offers laboratory and on-line analyzers that measure iodine values and free fatty acid content automatically. They are designed to determine iodine value in three minutes and free fatty

acid content in two minutes in the lab. The on-line process analyzer measures free fatty acid content in 4 minutes. Iodine values are measured in the 0-200 IV range; free fatty acid determinations for edible oils can be made in the 0.01-0.10% range. Contact: FIATron Laboratory Systems, 510 South Worthington St., Oconomowoc, WI 53066.

FLUORESCENCE ANALYZER

Technicon Industrial Systems Corp. has available a multi-product analyzer which works on the principle of X-ray fluorescence. The ExAAAct-1 is designed to perform elemental analysis on powders, solids, liquids and pastes in food processing applications. It has the capability to analyze up to six elements simultaneously and can be operated by non-technical personnel. Contact: Technicon Industrial Systems Corp., 511 Benedict Ave., Tarrytown, NY 10591.

INFO PROGRAM

QuikInfo, a microcomputer information program for engineers, technicians and scientists, contains numerous conversions from one