

BOOK EXHIBITS
AOCS 49th Annual Fall Meeting
September 28-October 1, 1975
Cincinnati, Ohio



American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

Compilation of Odor and Taste Threshold Value Data. Edited by W.H. Stahl. DS 48. This volume contains odor threshold data on 775 compounds and taste threshold data on 435 compounds. It is the first book of its type to be published. Information includes type, modality, media, purity, threshold values, units, molecular weight, Wiswesser Line Notation, literature source. 260 pp. \$25.00, 20% discount to ASTM members. 1973.

A.V.I. Publishing Company, 250 East State Street, P.O. Box 831, Westport, CT 06880.

Encyclopedia of Food Technology. Edited by Arnold H. Johnson and Martin S. Peterson. From "Acidulants" to "Zero Milk" the *Encyclopedia of Food Technology* contains more than 1000 pages on 275 subjects pertinent to food technology and information which will be of general interest to all. 1008 pp. \$65.00. 1974.

Food Processing Equipment. Dennis R. Heldman. The purpose of this textbook is to provide in depth analysis of processes which are closely related to food processing equipment design. 391 pp. 1975.

Fundamentals of Dairy Chemistry. Second Edition. Edited by B.H. Webb, A.H. Johnson, J. A. Alford. *Fundamentals of Dairy Chemistry* has been the standard reference text for research scientists, advanced food science students, and libraries. The First Edition (1965) was the successor to *Fundamentals of Dairy Science*. 923 pp. Domestic \$39.00; Foreign \$40.00. 1974.

Peanuts: Production Processing, Products. J.G. Woodroof. The latest and most complete description of peanut production, processing and products by one who literally grew up in a peanut field, this book is for those who grow, store, or process peanuts. 330 pp. Domestic \$19.00; Foreign \$20.00. 1973.

CRC Press, 18901 Cranwood Parkway, Cleveland, Ohio 44128.

Feranoli's Handbook of Flavor Ingredients. Vol. I & II, Thomas E. Furia and Nicolo Bellanca. These volumes are revised, second editions. They include the same 4-part format used in the first edition, and corrections, additions, and new contributions have been included. The new material presented in these two volumes include data on new synthetic flavor ingredients, an updating of the natural occurrence of flavor ingredients, addition of references, and utilization of new, comprehensive reviews of significant flavor topics. Volume I includes the sections on General Considerations (270 pp.) and Natural Flavors (256 pp.). Volume II includes the sections on Synthetic Flavors (560 pp.) and Use of Flavor Ingredients (314 pp.).

Handbook of Food Additives. Thomas E. Furia. Most of the chapters of this second edition have been revamped to include new data on and new uses of food additives. The chapter on non-nutritive sweeteners has been reissued, but cyclamates have been deleted from the current edition. Additional changes in this edition include the lowering of use levels of brominated vegetable oil, possible restrictions against FD & C Red No. 2, FDA's proposed ban on diethyl pyrocarbonate, and the addition of about 125 new flavor ingredients. A new chapter, Phosphates in Food Processing, also has been added. 998 pp. \$44.95. 1973. Vol. I: 525 pp. \$32.95. 1975. Vol. II: 925 pp. \$43.95. 1975.

Man, Food and Nutrition. Miloslav Rechcigl, Jr. This book covers several aspects of food production, including methods of increasing food production, improving quality of foods, and reducing spoilage and waste of food products. 344 pp. \$29.95. 1973.

World Food Problem: A Selective Bibliography of Reviews. Miloslav Rechcigl, Jr. This book gives a very comprehensive bibliography on the state of world food production and nutrition. The bibliographies concerning world food and nutrition are categorized by country, and the bibliographies dealing with food production are categorized by individual crops and food animals. The section on food hazards and food safety gives a breakdown of diseases and toxicants that is very impressive.

Elsevier Publishing Company, 52 Vanderbilt Avenue, New York, NY 10017.

Rapeseed: Cultivation, Composition, Processing and Utilization. L.A. Appleqvist and R. Ohlson.

Halsted Press, a Division of John Wiley & Sons, Inc., 605 Third Ave., New York, NY 10016.

Automatic Chemical Analysis. J.K. Forman and P.B. Stockwell. In this book, two well-known authorities on automatic analysis provide a critical evaluation of all analytical techniques in which significant progress in automation has been made. They describe and discuss the published achievements and highlight the potential scope and limitations of each development. \$44.00. 346 pp. 1975.

Biochemical Spectroscopy. R.A. Morton. 2 Volume set. \$197.50. 873 pp. 1975.

Chemical Analysis of Ecological Materials. Stewart E. Allen, H. Max Grimshaw, John A. Parkinson and Christopher Quarumby. Edited by Stewart E. Allen. This manual describes and discusses techniques that are suitable for the chemical analysis of soils, plant materials, animal tissue, and fresh waters. Some of the simpler analytical procedures are given, but most modern instrumental techniques are also dealt with in detail. 565 pp. \$39.95. 1975.

Ecological Aspects of Toxicity Testing of Oils and Dispersants. Edited by L.R. Beynon and E.B. Cowell. This volume contains the proceedings of a workshop convened by the Institute of Petroleum, London. The book contains papers from leading European research workers in the oil and dispersant toxicity testing fields together with a critical review of the papers presented and a full report of the ensuing discussion. 149 pp. \$15.50. 1974.

Oxidation of Petrochemicals: Chemistry and Technology. Theodore Dumas and Walter Bulani. This is probably the first publication to provide a comprehensive coverage of the chemistry and technology of the oxidation of petrochemicals. The major processes used throughout the world for the manufacture of basic chemicals are described, compared, and related whenever possible to the corresponding fundamental process. 186 pp. \$18.75. 1975.

Pollution Criteria for Estuaries. Edited by P.R. Helliwell and J. Bossanyi. The book comprises the fourteen papers and edited discussion of the conference held at the University of Southampton, July, 1973. Topics range over the whole spectrum of disciplines. Some stress is laid on the importance of aesthetics and the recreational values of unpolluted water. Methods currently used for assessing the impact of various waste flows to estuaries are presented and critically examined. Approx. 310 pp. \$34.50. 1975.

Recent Analytical Developments in the Petrochemical Industry. Edited by D.R. Hodges. The papers collected in this book reflect the pace and direction of analytical development in the petroleum industry over the last decade. 337 pp. \$32.50. 1975.

Robert E. Krieger Publishing Co., Inc., P.O. Box 542, Huntington, NY 11743.

Microscopic Sedimentary Petrography. A.V. Carozzi. Contents include Introduction; Clastic Rocks: Arenaceous Rocks, Rudaceous Rocks, Pyroclastic Rocks, Argillaceous Rocks; Biochemical Rocks: Carbonate Rocks, Siliceous Rocks, Iron-Bearing Rocks, Phosphoritic Rocks; Chemical Rocks: Evaporitic Rocks. 485 pp. \$19.50. 1960.

Standard Methods of Chemical Analysis: The Elements. 6th Edition. Vol. I. N.H. Furman, Editor. Previous editions edited by W.W. Scott. Reprint of 6th edition, 1962-1966. published by Van Nostrand, includes bibliographical references. 1420 pp. \$39.50.

Oxford University Press, 200 Madison Avenue, New York, NY 10016.

Perspectives on Energy: Issues, Ideas and Environmental Dilemmas. Edited by Lon C. Ruedisili and Morris W. Firebaugh. This is an up-to-date collection of articles on energy and the environment organized in five sections: Posing the Dilemmas; Fossil-Fuel Energy Sources; Nuclear Fission as an Energy Source; Alternative Energy Sources; and Energy Policy Recommendations and Future Directions. 544 pp. Cloth: \$10.95. Paper: \$6.50. 1975.

Plenum Publishing Corp., 227 West 17th Street, New York, NY 10011.

Biomembranes. Vol. 7. Edited by Henryk Eisenberg and Ephraim Katchalski-Katzir, Lionel A. Manson. Aharon Katzir Memorial Volume. This memorial volume, the seventh volume in the widely acclaimed Biomembranes series, pays a fitting tribute to this acknowledged leader by bringing together those students and colleagues who knew

and respected both the man and the scientist. Seventeen international specialists present authoritative reviews on one of the most notable areas of study inspired by Katchalsky's research on biological membrane phenomena. 257 pp. \$24.50. 1975.

Enzyme Engineering. Edited by E. Kendall Pye and Lemuel B. Wingard, Jr. Filling the need for a concise report on theoretical and experimental applications of enzymes, this innovative work reports on major recent developments in the theory and application of immobilization techniques in each of these major areas. The proceedings of the Second Engineering Foundation International Conference held in Henniker, NH, August 5-10, 1973. 470 pp. \$27.50. 1974.

Food for Life. F.E. Deatherage. This book clarifies the issues involved in the one problem that is crucial to us all—food. A fundamental text for students and professionals alike, it defines the interacting principles of the biological, physical and social sciences that determine how food is produced, processed, distributed, and consumed. 225 pp. \$25.00. 1975.

Fungal Lipid Biochemistry. John D. Weete. Vol. I in *Monographs in Lipid Research.* Reflecting progress in the field of lipid biochemistry in the past 25 years, this volume examines in-depth distribution and biochemistry of lipids and fungi. Reviewing the literature to date, the author explores total lipid abundances in fungal cells and cell fractions and the distribution and metabolism of the major lipid classes as they occur in fungi. 393 pp. \$25.00. 1974.

The Gangliosides. Edited by Bruno W. Volk and Larry Schneck. Incorporating clinical, genetic, neuropathological, enzymatic, and neurochemical developments in storage disease research, this book provides a multidisciplinary approach to the study of gangliosidoses. The work covers

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every aspect of ganglioside diseases from the clinical, pathological, and genetic components of various disorders to the observed and theoretical effects of enzyme deficiencies. 277 pp. \$22.50. 1975.

Immobilized Biochemicals and Affinity Chromatography. Edited by R. Bruce Dunlap. Vol. 42 in *Advances in Experimental Medicine and Biology*. This work discusses the potential of this new process in the purification of enzymes and proteins, in the employment of immobilized enzymes as useful catalysts, and in the study of three-dimensional configurations of proteins and enzymes. Approx. 360 pp. \$22.50. 1974.

Immobilized Enzymes in Food and Microbial Processes. Edited by Alfred C. Olson. Reporting on current trends in the rapidly expanding field of enzyme engineering, this innovative volume explores the latest theoretical and practical advances in research on immobilized enzymes in food and microbial processes. The proceedings of an A.C.S. symposium held in Chicago, August 26, 1973. Approx. 260 pp. \$18.50. 1974.

Immobilized Enzyme Technology: Research and Applications. Edited by Howard H. Weetall and Shuichi Suzuki. The potential value of immobilized enzymes in analytical, medical, and industrial processes is stimulating wide interest in scientific communities throughout the world. This volume presents up-to-date reports on research and development of immobilized enzyme technology in both Japan and the US. In addition, this important book reviews the fundamental theory of immobilized enzymes and chemical engineering aspects of enzyme engineering.

Journal: Chemistry and Technology of Fuels and Oils. Translated from Russian journal, *Khimiya i Tekhnologiya Topliv i Masel*. Published bi-monthly. Subscription rate: \$235.00.

Methods in Membrane Biology. Vol. 4. *Biophysical Approaches*. Edited by Edward D. Korn. The fourth volume in this series examines the determination of the molecular arrangements of membrane lipids and proteins and the study of the dynamics of their interrelationships by means of two physical methods—fluorescence spectroscopy and differential scanning calorimetry. Approx. 330 pp. \$22.50. 1975.

Methods in Membrane Biology: Transport. Vol. 5. Examining transport in membranes, Vol. 5 reviews the functions and forms of this vital phenomenon and analyzes the theoretical bases and experimental practicality of various methods of measurement. The different advantages of using intact cells or isolated membrane vesicles in transport studies are fully discussed. Approx. 200 pp. \$19.50. 1975.

Permeability of Plastic Films and Coatings to Gases, Vapors, and Liquids. Edited by Harold B. Hopfenberg. This volume deals with the solution, diffusion and permeation of gases, vapors and liquids in a wide variety of synthetic polymer films. The proceedings of the Borden Award Symposium of the Division of Organic Coatings and Plastic Chemistry of the American Chemical Society, honoring Professor Vivian T. Stannett, held in Los Angeles, April, 1974. 482 pp. \$37.50. 1974.

The Practice of NMR Spectroscopy. Edited by Nugent F. Chamberlain. Of interest to biochemists, molecular biologists, pharmaceutical scientists, pharmacological scientists, medical research workers, neurochemists, neuropharmacologists, geochemists, pollution research workers and others. 424 pp. \$29.50. 1974.

The Prostaglandins. Edited by Peter Ramwell. Vol. 2. Recent research on the chemistry of prostaglandins is generally challenging, new problems to biochemists. Critically examining the most recent developments in the field, Vol. 2 provides a review of the literature to date and a systematic and interdisciplinary approach to this growing field. 350 pp. \$29.50. 1974. ■

Polyethylene in Fats and Oils

Laboratory General Information Method Revision 4, Proposed Procedure

Definition: This method determines polyethylene present in Fats and Oils by a gravimetric procedure. A tetrachloroform solution is filtered to remove polyethylene and other chloroform insoluble matter. Polyethylene then is dissolved in hot tetrachloroethylene, filtered, and precipitated by addition of cold methanol. The resulting precipitate is isolated and weighed as polyethylene.

Scope: Applicable to fats and oils.

A. Apparatus:

1. Two (2) beakers; 600 ml and 400 ml.
2. One (1) California Modified Buchner funnel, size 7.0 cm internal diameter (ID) (Labconco, 8811 Prospect Road, Kansas City, MO); 1 porcelain Buchner funnel, size #1, 56 mm ID.
3. Two (2) vacuum filtering flasks, 1 liter and 500 ml.
4. Metal retaining rings: Size #1—7.0 cm outer diameter (OD) x 5 cm length x 3.0 mm wall thickness; and Size #2—5.4 cm OD x 4.0 cm length x 2.0 mm wall thickness (G & G Mfg. Co., 7006 SW 14th Ave., Des Moines, IA 50315).
5. Filter paper: Glass Fibre, 7.0 cm and 5.5 cm; Reeve Angel #934-AH or Whatman Type GFA, predried at 150 C, Store Indessic; Whatman #4—5.5 cm or equivalent.
6. Three (3) wash bottles, Guth Universal, 500 ml, hand operated with Kool-Grip neck; or equivalent.
7. Filter aid, official diatomaceous earth of AOCS.
8. Hot plate
9. Drying oven, 105 C.
10. Cold water bath, 10 C maximum.

B. Reagents:

Chloroform, reagent grade
Tetrachloroethylene, reagent grade
Methanol, reagent grade

C. Procedure:

1. Warm, or cool sample to $40\text{ C} \pm 2\text{ C}$ and agitate thoroughly until a uniform homogeneous mixture is obtained. This should be followed for each individual sampling.
2. Immediately weigh 100 ± 0.5 gm of sample to be analyzed into a 600 ml beaker. (See note #1 for weighing instruction.)
3. Add 300 ml chloroform. Stir until fat is completely dissolved. Add 2.0 ± 0.1 gm filter aid; mix until completely dispersed. DO NOT HEAT.
4. Attach the California Modified Buchner funnel to a 1 liter filtering flask. Place 2 pieces of 7.0 cm fiber glass paper and size 1 retainer ring in the funnel. Pre-wet filter paper with chloroform prior to filtration. Apply gentle suction and pour the mixture rapidly into the funnel, taking care to keep it from going dry.
5. Wash beaker, retainer ring, and paper thoroughly with ca. 50 ml chloroform from the wash bottle. Pull air through filter for 2 min (minimum) to dry. Discard filtrate.
6. Bring 75 ml tetrachloroethylene to a brisk boil on a hot plate in a 400 ml beaker. Using gloves or tongs, remove from hot plate and transfer filter paper from step #4 to beaker; stir for 2 min with a glass rod.
7. Attach porcelain Buchner funnel, to which a 2 in. length of rubber tubing has been attached to the stem to prevent filtrate from being drawn into the