The Chicago Convention Program Nears Completion

WITH 44 papers in and more to come, the Technical Program for the Fall Meeting, October 30–November 1, at Chicago, is taking definite shape. These 44 papers are categorized by titles, authors and affiliations as follows:

Analytical Methods

Analysis of Non-volatile Material in Solvent Hexane, J. K. Boggs, Esso Research and Engineering Company, Linden, N. J.

The Adsorption and Chromatography of Alkyl Benzene Sulfonates on Charcoal, by K. V. Mysels and B. Bisivas, University of Southern California, Los Angeles, Cal. and M. Tuvell, Monsanto Chemical Co., St. Louis, Mo.

Coulometric Determination of Organic Acids, by Robert O. Crisler and Ralph D. Conlon, The Procter and Gamble Co., Cincinnati, Ohio.

A Comparison of Analytical Techniques for Prediction of Relative Shelf Stability of Fats and Oils to Oxidation, by W. D. Pohle, R. L. Gregory, and J. R. Taylor, Swift and Company, Chicago, Illinois.

Analysis of Lipids and Oxidation Products by Partition Chromatography: Partial Glycerides, by C. D. Evans, D. G. McConnell, E. N. Frankel, E. J. Panek, Northern Regional Research Laboratory, Peoria, Illinois.

Graphic Aid for Interpreting Gas Chromatograms, by C. D. Evans, P. M. Cooney, and E. J. Panek, Northern Regional Research Laboratory, Peoria, Illinois.

A Study of the Applicability of a Modified Thiobarbituric Acid Test to Flavor Evaluation of Fats and Oils, by Glen A. Jacobson, J. A. Kirkpatrick, and H. E. Goff, Jr., Campbell Soup Company, Camden, N. J.

Determination of Double Bond Structure via Reductive Ozonolysis, by O. S. Privett and Christense Nickell, Hormel Institute, Austin, Minnesota.

Interpretation of Various Assays for Vitamin A in Margarine, by R. W. Lehman, Distillation Products Industries, Rochester, N. Y.

Biochemistry and Nutrition

Lipid Alterations in Normal and Reticulo-endothelial Stimulated Rats Following Carbon Tetrachloride, by N. R. DiLuzio, University of Tennessee Medical Units, Memphis, Tennessee.

Dietary Fat and X-Irradiation Damage, by H. Kaunitz, C. A. Slanetz, R. E. Johnson, P. L. Fahrney and Vigen Babayan, Columbia University, New York, and E. F. Drew, Boonton, N. J.

Dietary Fat and Tocopherol Requirements in Rats, by C. A. Slanetz, H. Kaunitz, R. E. Johnson, P. L. Fahrney and V. Babayan, Columbia University, New York, and E. F. Drew, Boonton, N. J.

The Chick Edema Factor and Its Relation to the Fatty Acid Industry, by T. McGuine, Wilson-Martin, Philadelphia, Pa.

Bile Acid Metabolism and Its Relation to Cholesterol Metabolism in Man, by S. A. Hashim, Laboratory for Metabolic and Nutritional Studies, St. Luke's Hospital, New York City, N. Y.

Detergents

Reactions Between Zinc Salts and Surfactant Solutions, by R. D. Vold and H. Singh, University of Southtern California, Los Angeles, Cal.

Coacervation in Aqueous Cationic Soap Solutions, by I. Cohen and T. Vassiliades, Polytechnic Institute of Brooklyn, Brooklyn, N. Y.

A Simplified Form of Kubelka-Munk Equation for Soil Removal Calculations, by A. R. Martin, Whirlpool Corporation, St. Joseph, Mich.

A New Concept in Artificial Soiling, by A. R. Martin, A. Tincher, P. Rutkowski and D. C. Wood, Whirlpool Corporation, St. Joseph, Mich.

Hard Surface Detergency, by A. M. Mankowich, Coating and Chemical Laboratory, Aberdeen Proving Ground, Md.

A. A. RODEGHIER
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A. V. GRACI, JR.
Co-Chairman

Sodium Salts of Alkyl Esters of a-Sulfo Fatty Acids. Wetting, Lime Soap Dispersion, and Related Properties, by A. J. Stirton, R. G. Bistline, Jr., J. K. Weil, W. C. Ault and E. W. Maurer, Eastern Regional Research Laboratory, Philadelphia, Pa.

Role of Water in Micelle Formation, by H. B. Klevens, M-K Research & Development Company, Pittsburgh, Pa.

Effect of Electrolytes on Micellar Properties of Nonionic Detergents, by M. J. Schick, Lever Brothers Company, Edgewater, N. J.

The Influence of Surface Active Agents on Solid-Liquid Dispersions, by J. J. Chessick and A. C. Zettlemoyer, Lehigh University, Bethlehem, Pa.

Fat Composition and Processes

Thalictrum Polycarpum Fatty Acids—A New Class of Fatty Acids from Vegetable Seed Oils, by M. O. Bagby, C. R. Smith, Jr., K. L. Mikolajczak, and I. A. Wolff, Northern Regional Research Laboratory, Peoria, Illinois.

Vernonia Anthelmintica Willd. Enzyme Activity in the Seed, by W. E. Scott, C. F. Krewson and R. W. Riemenschneider, Eastern Regional Research Laboratory, Philadelphia, Pa.

Vernonia Anthelmintica Seed Oil as a Stabilizer for Plasticized Polyvinyl Chloride, by G. R. Riser, J. J. Hunter, J. S. Ard and L. P. Witnauer, Eastern Regional Research Laboratory, Philadelphia, Pa.

Methods for Improved Yields of Cyclic Acids, by J. P. Friedrich, J. C. Palmer and J. C. Cowan, Northern Regional Research Laboratory, Peoria, Illinois.

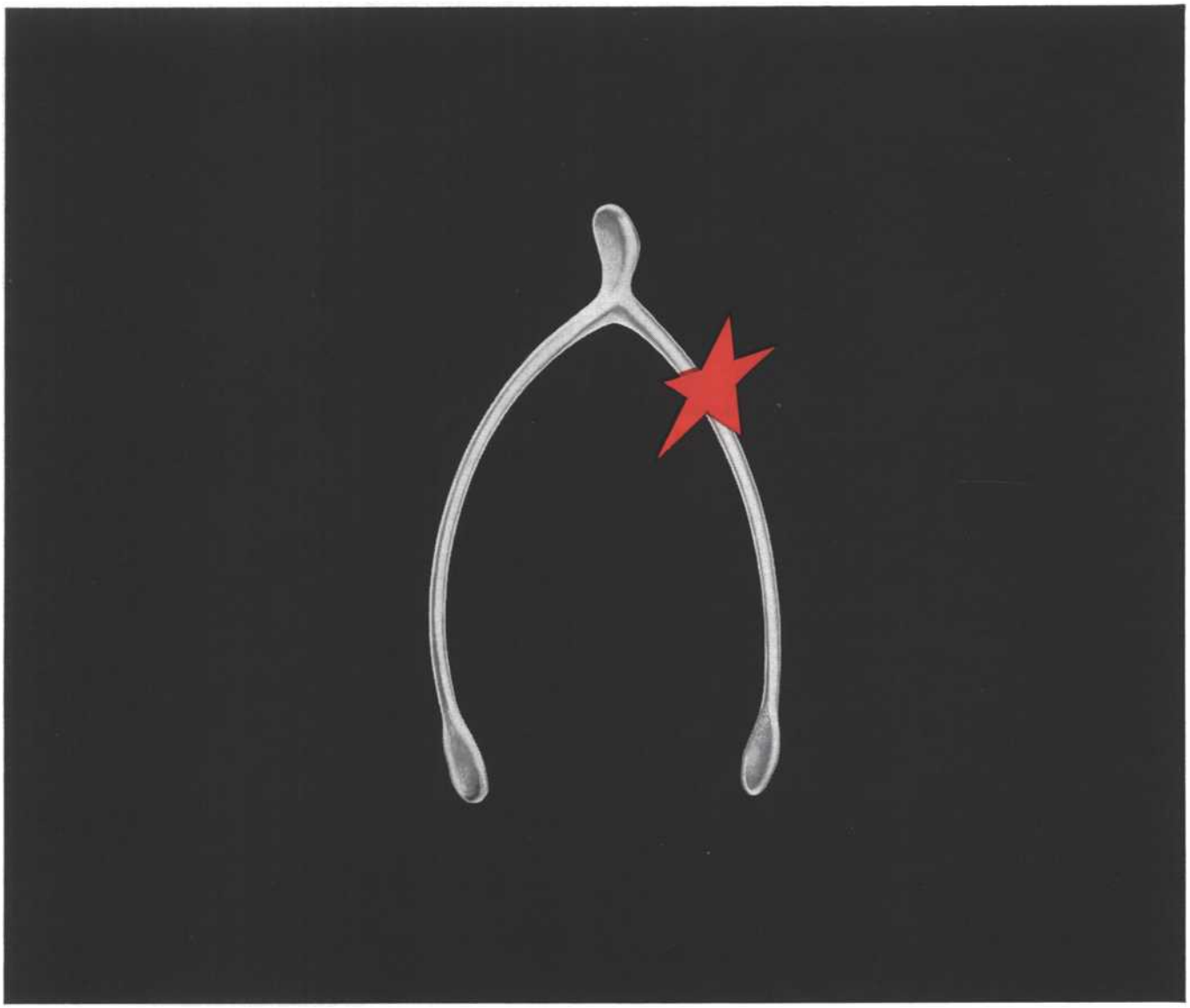
Lipid Changes in Maturing Oil-Bearing Plants, Part III. Changes in Lipid Classes in Flax and Safflower Oils, by Mary E. McKillican and R. P. A. Sims, Canada Department of Agriculture, Ottawa, Canada.

A Commercial Process for the Recovery of Deodorizer Distillates, by R. J. Fiala, A. E. Staley Manufacturing Company, Decatur, Illinois.

Tempering Triglycerides by Mechanical Working, by R. O. Feuge, W. Landmann, D. Mitchem and N. V. Lovegren, Southern Regional Research Laboratory, New Orleans, La.

Hydrogenation of Linolenate. VII. Separation and Identification of Isomeric Dienes and Monoenes, by B. Sreenivasan, J. Nowakowska, E. P. Jones, E. Selke, C. R. Scholfield and H. J. Dutton, Northern Regional Research Laboratory, Peoria, Ill.

Autoxidation of Soybean Oil: Investigations on Highly Volatile Decomposition Products, by C. D. Evans, P. M. Cooney and H. J. Dutton, Northern Regional Research Laboratory, Peoria, Ill.



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Entertainment

A. F. KAPECKI
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N. W. ZIELS
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Advisor

Soybean Unsaponifiables: Chromatographic Separations and Characterization, by R. L. Hoffman, H. A. Moser, C. D. Evans and J. C. Cowan, Northern Regional Research Laboratory, Peoria, Illinois.

Mass Spectrometry and Lipid Research, by E. Selke, C. R. Scholfield, C. D. Evans and H. J. Dutton, Northern Regional Research Laboratory, Peoria, Illinois.

Characterization of Carbonyl Compounds in Reverted Soybean Oil, by B. D. Mookherjee and S. S. Chang, Rutgers, The State University, New Brunswick, N. J.

Studies on the Initial Stages of the Autoxidation of Polyunsaturated Methyl Esters, by O. S. Privett and M. L. Bland, The Hormel Institute, University of Minnesota, Austin, Minnesota.

Chemical Reactions and Derivations

Diesters and Diamides of α-Sulfopalimitic and α-Sulfostearic Acids, by J. K. Weil, A. J. Stirton and R. G. Bistline, Jr., Eastern Regional Research Laboratory, Philadelphia, Pa.

Further Studies on Methanesulfonic Acid Catalyzed Additions to Oleic Acid, by A. Eisner, T. Perlstein and W. C. Ault, Eastern Regional Research Laboratory, Philadelphia, Pa.

An Infrared Study of the Drying of Linseed Oil at Elevated Temperatures, by E. J. Kahler, D. A. Berry, G. E. Cremeans, R. J. Jakobsen and E. R. Mueller, Battelle Memorial Institute, Columbus, Ohio.

Dialkyl Esters of Alpha-Sulfofatty Acids, by J. J. McBride, Jr. and E. J. Miller, Armour Industrial Chemical Company, McCook, Illinois.

Effect of Ethylene on Cyclic Acid Yields from Linseed Oil and Linolenic Acid, by R. E. Beal, R. A. Eisenhauer and E. L. Griffin, Jr., Northern Regional Research Laboratory, Peoria, Illinois.

Emulsifiers Derived from Linseed Oil and Their Potential Use in Coatings, by W. L. Kubie, J. L. O'Donnell, H. M. Teeter and J. C. Cowan, Northern Regional Research Laboratory, Peoria, Illinois.

Some Factors Affecting the Stability of Linseed Oil Emulsion Paints Containing ZnO, by A. W. Schwab, J. A. Stolp, L. E. Gast and J. C. Cowan, Northern Regional Research Laboratory, Peoria, Illinois.

Some Engineering Factors Relating to the Continuous Sulfonation Process, by J. W. McCutcheon, John W. McCutcheon, Inc., Morristown, N. J.

Entertainment

ON SUNDAY evening from 5 to 7, October 29, a mixer will be held in the Avenue West room of the Pick-Congress where those who arrive early may meet old and new friends.

On Monday at 6 p.m. the Eastman Cocktail Party will take place in the Gold Room. This is being sponsored by Distillation Products Industries and Eastman Chemical Products, Inc.

The banquet will begin at 7 p.m. Tuesday evening. It will be in the Great Hall, with Bert Rose and his Orchestra furnishing music for the dinner and the dancing to follow. Entertainment chairman Decatur B. Campbell, Jr., promises a program of interesting entertainment.

THE LADIES will have a varied schedule this year. Mary Harmeson, chairwoman of the Ladies Entertainment Committee, has announced the following itinerary. Monday, October 30, at 8:30 a.m., the ladies will meet in the Plaza Room of the Pick-Congress Hotel for rolls and coffee. At 9:00 they will depart by bus for Dundee, Ill., and at 10:30 will tour the Haeger Pottery Plant. Luncheon is scheduled for 12:30 at "The Evergreens" in Dundee with favors and door prizes. Tuesday will begin with coffee and rolls in the Plaza Room at 9 a.m., followed by a visit to the Patricia Stevens Salon at 10. Luncheon will be at 12:15 at "Kungsholm's" and will be followed at 2 p.m. with one of Kungsholm's famous miniature operas. Door prizes will again be given. Wednesday morning the ladies will meet for coffee and rolls at 9 a.m. in the Plaza Room. At 10 they will go "Inside the Walls of the Chicago Police Department" for a tour of the city's crime detection laboratories. Luncheon on the final day of the convention will be at 12 noon in the Belmont Room of the Pick-Congress.

• *Names in the News*

James A. Kime (1940) has been awarded the Department of Army Sustained Superior Performance Award by the U. S. Army Chemical Corps Biological Laboratories, Fort Detrick, Frederick, Maryland.

James Kime, a physical science administrator, received the award for his contributions in studies involving laboratory operations, collection and evaluation of scientific information, and for his assistance in establishing a cooperative agreement between the Biological Laboratories and the Food and Drug Administration. He is a graduate of Tarkio College, and holds an MA from George Washington University. He is a member of the American Chemical Society, American Oil Chemists' Society, Southern Association of Science and Industry, and Alpha Chi Sigma.

Robert J. Jeffries, founder and president of Data Control Systems, has been reappointed for a three-year term as the representative of the Instrument Society of America on the National Research Council.

R. A. Hartley of Montreal has been named the first prize winner of the 1961 Protective Coatings Award for his paper, Surface Coatings for Marine Conditions. Mr. Hartley is technical manager for International Paints, Limited, Montreal, Canada.

Conducting an experimental epoxidation reaction at SOLVAY Technical Service, Syracuse, N. Y.

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- ☐ **B.** "Recent Advances in Uses for Epoxidized Fatty Acid Derivatives." HP-19
- ☐ **C.** "Reduction of Cleavage in Epoxidation Reactions." HP-20
- ☐ **D.** "Bulk Storage of Hydrogen Peroxide." HP-9
- ☐ **E.** "The Analysis of Hydrogen Peroxide." HP-10
- ☐ See attached letter on my problem.

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United Engineering Center

In the early part of September, 19 professional engineering societies, with memberships totalling 300,000, moved into the new 20 story $12,000,000 United Engineering Center on United Nations Plaza. This is the largest congregation of such organizations in the free world, with space available for others in the near future.

The occupants include the five "Founder Societies"—the American Society of Civil Engineers, the American Institute of Mining, Metallurgical, and Petroleum Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers, and the American Institute of Chemical Engineers.

The Center is owned and operated by the United Engineering Trustees, Inc., agency of the five Founder Societies. Funds for the new Center have been provided by contributions of members of the organizations, by industry and others. Formal dedication has been scheduled for early November, with former President Herbert Hoover as Honorary Chairman.

Soviet Science Publications

A Soviet study of rare earth spectroscopy, described by Russian scientists as the first systemized analysis of the experimental and theoretical data in this field, has been translated and released as a service to American science by the U. S. Atomic Energy Commission. This monograph by M. A. El'yashevich encompasses the problems of spectroscopy, and is entitled Spectra of the Rare Earths, Books I and II.

Other releases by the United States Department of Commerce include: Interpretation of Reflection Shooting Data, a Soviet Geophysicist's study, and Soaps, Detergents, Cleaning Agents, a selective bibliography on soaps, and cleaning agents.

For further information on these releases, write to Publications and Public Information Division of the Office of Technical Services of the Business and Defense Services Administration, Washington, D. C.

Armour Industrial Chemical Company. A 12 page booklet covering the company's fatty acids, amines, diamines, acetates, quaternary ammonium chlorides, nitriles, amides, ethoxylated chemicals, fuel oil additives, anti-caking and anti-dusting agents, and acid corrosion inhibitors. It also lists Armour sales offices in this country, Canada, and Mexico. Armour Indutrial Chemical Company, 110 N. Wacker Drive, Chicago 6, Ill.

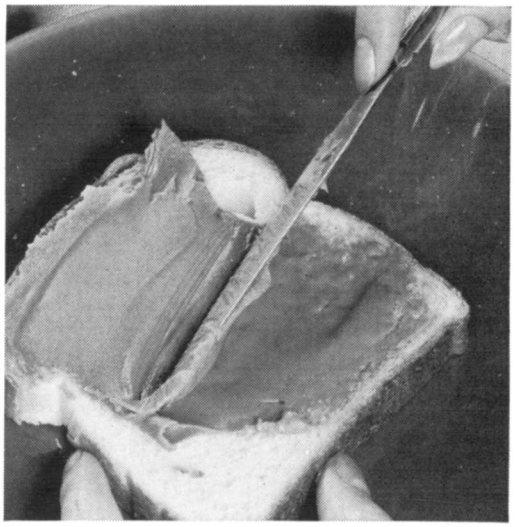
Monsanto Chemical Company, Plastics Division. A 16 page booklet published as a guide to those who buy plastics materials for their products, and featuring general information about the forms, typical uses, and characteristics of the company's fabricating, extruding, calendering and laminated materials; industrial, textile, surface and paper coating resins; adhesives and intermediates. Department FF, Monsanto Chemical Company, Springfield 2, Mass. Technical Bulletin No. PL327.

Snap-Tite, Inc. A 62 page catalog features a Packer Usage Guide, listing more than 575 fluids and gases, and pointing out the different types of seals to be used with these fluids at various temperature limits. This is the first time such a guide has been compiled in one catalog. Robert Johnson, Snap-Tite, Inc., Union City, Pa. Ask for Catalog 60 A.

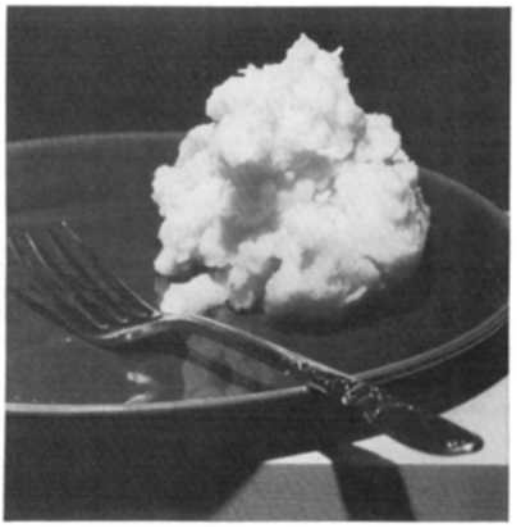
N. L. Murty (1960) has transferred from Texas A and M College System to the University of California Medical Center, located in Los Angeles.

Armond J. Fulco (1960) has moved from the UCLA Medical School to the Department of Chemistry at Harvard University.

Textures for sale



In fat-based foods *Myverol® Distilled Monoglycerides* are widely recognized for one group of effects. In shortening, for example, they so control the tricky relationship between batter "curdle," bubble size, and cell-wall strength that a wonderful cake texture comes out of the oven. They permit peanut butter to go to the beach on a July day without leaking oil, yet spread smoothly after a week in the refrigerator.



In starch-based foods *Myverol Distilled Monoglycerides* have won just as big a place for an entirely different effect—the complexing of dissolved amylose. Dehydrated potato products have enjoyed their rip-roaring success because they make up into a food that looks like, tastes like, and *is* mashed potato, not library paste. Hot cereals no longer need inevitably turn jellylike a certain time after cooking.

A very small content of these unique molecularly distilled monoglycerides profoundly affects the delicate architecture of foods. Prepared from the glycerolysis of edible fats or oils, *Myverol Distilled Monoglycerides* are exempt from the Food Additives Amendment. For technical data and prices write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • W. M. Gillies, Inc., West Coast • Charles Albert Smith Limited, Montreal and Toronto.

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1933—January, April, June, July, September

1934—June, July, September, November

1935—January, February

1939—February, August, September

1940—February, April, May, June

1947—April, July

1948—May

1950—January, February, April, May, June, November

1952—November

1954—February, March

1955—February, April

1957—April

1959—January, September

so that orders from various institutions to complete volumes may be filled. The issues, if donated, may be sent express collect to the American Oil Chemists' Society at 35 E. Wacker Drive, Chicago 1, Illinois. Correspondence is invited from those who have issues to sell.

• *Problem Corner*

Question June 26, 1961

I am seeking information on the shipping characteristics of refined coconut oil in bulk. The period between production and receipt at plant would approximate some 90 days of which 40 days would represent the sea voyage.

We are particularly interested in any information on the rise of free fatty acids which could be experienced over this period, and any known method of inhibiting the rise.

FROM AUSTRALIA

Answer

The degree of rise in refined coconut oil free fatty acids would depend entirely upon how completely the coconut oil had been refined, dried, and freed from soap before shipping.

We estimate that the refined oil should contain less than 0.1% moisture, preferably not over .05% moisture. It should be virtually soap free, i.e. less than two parts per million soap, expressed as sodium oleate.

A suggestion from an expert is to hold the refined oil at 90°F. or less for twenty-four hours to settle out the impurities and then filter at about 90°F. or less.

There should be little F.F.A. rise in a clean dry refined oil.

JOHN P. HARRIS, John P. Harris, Inc., Chicago, Ill.

• *Obituary*

James H. Brawner (1950). Chief Engineer, Southern Cotton Oil Division of Hunt Foods Company, New Orleans, died Sept. 6th, after a long illness.

James N. Stone (1958) has taken residency at the Chemical Division of the Glidden Company at Jacksonville, Florida.

• *New Books*

SILICONES, Edited by S. Fordham, (Philosophical Library, Inc., 246 pages, 1961, $10.00). This book is divided into twelve chapters each covering a separate and well-organized phase of the chemistry and uses of silicone resins, and the chemistry of organosilicone compounds. Thirteen authors assisted Dr. Fordham in the preparation of the individual chapters, and others were consulted in the makeup of the text. The index to the book is especially well done and enables location of particular points of interest with ease and rapidity.

The chapters on the chemistry of organosilicone compounds and the properties of silicones are the outstanding sections of the book. Presentation of the chemistry of organosilicone reactions is complete and in detail, as is the section on the properties of the silicones related to their molecular structure. All well known organosilicone reactions are covered, and both chapters close with excellent bibliographies presenting all known articles on the subject, and lists of important patents.

Chapters on silicone rubber and silicone resins are reasonably good presentations for these areas of industry, compounding information, resistance data, and similar information is included for typical silicone rubber formulations. The use of silicone resins in surface coatings, and other uses for silicone resins, are discussed quite concisely, but some compatability information is included.

For the most part, the rest of the book contains only brief discussions of the subject matter as nearly every use of silicone containing materials is mentioned. Excellent bibliographies and pertinent information follow each chapter.

This book was undoubtedly primarily written for use by organic chemists working with organosilane materials, although it provides sufficient information to be valuable to engineers and formulating chemists working in numerous silicone use areas.

GEORGE A. STEIN

MICRO-ORGANISMS AS ALLIES, by C. L. Duddington (The Macmillan Company, New York) 256 pages, 1961, $5.95). This volume is divided into 14 chapters and illustrated with 37 plates and figures. A bibliography and index are included.

This is the second book published by this author. The first was a monograph on the predacious molds entitled "The Friendly Fungi." This initial effort described in detail how these fascinating lower forms of life assist man in his struggle against round worm pests. This newest volume is a less specialized treatment of applied microbiology written for the layman and scientist alike. The concept that microbes are usually not harmful, as stressed in the title and illustrated by the contents of this book, is a fortunate thought intended to counteract the all too prevalent notion that most microbes cause disease and are therefore harmful. Mr. Duddington thinks and writes about micro-organisms as though they are "invisible livestock" which serve man just as realistically as do conventional farm animals.

Readers of this Journal, who are interested in general knowledge about the fermentation industry, will find this book useful. As would be expected in a work of this kind, nothing is presented regarding paint mildew, just to mention a possible area of interest to oil chemists. However, some of the industrial processes described would be of interest even to the research microbiologist, particularly if outside his area of specialization.

The author spent a disproportionately large part of his time on yeast fermentations. In fact, five of the fourteen chapters are devoted to these sugar-loving forms. With so many vitamins, drugs, and other products being made by fermentation processes, it would seem that a larger share of the available space should have been spent on other kinds of microbial livestock. In spite of this criticism, Mr. Duddington's second book is the kind of publication that we need. I hope that he will continue to share with us the fruits of his experience and judgment.

RALPH O. WEBER, Archer-Daniels-Midland Co., Minneapolis, Minn.

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- Vitamin A with other food colors.

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THE BEHAVIOR OF PLASTICIZERS, by Ibert Mellan (Pergamon Press); 273 pages, 1961, $8.00. This book is a more or less adequate description of the state of plasticizer art and technology today. Although all of the important subjects within the scope of plasticizers are covered in this book, they are covered to different degrees of detail and completeness. This is perhaps the major weakness of this book. In particular, this reviewer was concerned with the limited amount of space devoted to low temperature performance, migration, and transition temperatures, just to mention three important subjects. Internal plasticization is discussed by the author in a way that appears to be entirely at variance with the general definition of internal plasticization. To this reviewer, internal plasticization refers to built-in plasticizers, which are chemically bound to the backbone of the high polymer. Regardless of our definitions, however, a discussion of chemically bound plasticizers could not be found in the book. Coverage of the literature seemed to be fairly adequate but, in the opinion of this reviewer, was quite incomplete from approximately 1956 to the present time.

There is much useful material in this book and, until a definitive work on plasticizers is available, the book is recommended for those who wish to obtain a background in plasticizers as well as to know which plasticizers are important articles of commerce today. The book is easy to read, and the figures and tables are clear. This book should also be of value to investigators working in the field of derivatives of fats since many important commercial plasticizers are either fat-derived directly or are prepared from cleavage products of fats.

DANIEL SWERN, Eastern Regional Research Laboratory, Philadelphia, Pa.

LES OPERATIONS UNITAIRES DU GENIE CHIMIQUE, by M. Loncin (Dunod editors, 92 Rue Bonaparte, Paris 6) 752 pages, 1961, 115 Francs. The book presents a review of the fundamental aspects of modern chemical engineering and its application to chemical, biochemical, and food industries.

The initial chapter on "General Principles of Transfers" deals with transfers in a homogeneous non-moving phase, in a homogeneous moving phase and between phases. Emphasis is placed on the application of "potentiality factors" which permit the calculation of the numbers of transfer units, as well as of "facility coefficients."

The principles of Chapter 1 are applied in the following chapters dealing with gas/liquid, liquid/liquid, solid/liquid, decantation under the action of gravity or centrifugal force, filtration, pasteurization and sterilization, evaporation, distillation (including also special techniques such as extractive, azeotropic, molecular, and steam distillation), drying (by boiling, in a current of gas, in the frozen state, etc.) as well as grinding, sizing and mixing. Each of the chapters is divided into a theoretical study of the operation, a description of the types of apparatus and the necessary data for the choice of the type of apparatus.

The final chapter considers the choice of construction material.

M. LONCIN,
University of Paris

Mr. Guy Chipperfield, recently re-elected president of the International Association of Seed Crushers for the eleventh successive year, died suddenly Wednesday, July 26, at the age of 67. He was with Lever Bros. for many years. Mr. Chipperfield was a keen advocate of productivity both in the factory and on the farm, and he encouraged the development of progeny and performance testing of cattle, pigs and other livestock. In 1955 he was made a Commander of the Order of the British Empire, and in 1957 was appointed a Commander of Merit of the Republic of Italy.

D. W. Turnham (1951) has taken on new duties as Head Chemist for the Swift & Co. laboratory at the National Stock Yards plant near East St. Louis, Illinois.