

Lindsay Named Program Chairman

CHAIRMAN of the program committee for the 51st annual meeting of the American Oil Chemists' Society in Dallas, Tex., April 4-6, 1960, will be J. D. Lindsay of A & M College of Texas, according to announcement by the general chairman, R. C. Pope of the Pope Testing Laboratories, Dallas.

Assisting Dr. Lindsay will be the following: H. D. Fincher, Anderson, Clayton and Company, Houston; W. D. Harris, Raymond Reiser, and Cecil Wamble, all of A & M College of Texas, College Station; A. H. Lamb, Anderson, Clayton and Company, Dallas; and O. K. Sieplein, Sherwin-Williams Company, Garland.

This technical program committee invites contribution of technical papers, emphasizing that for the profession to grow it is important that the results of research be disseminated by technical talks and publications. A deadline of February 1, 1960, has been set for the title and abstract. These should be sent as early as possible to J. D. Lindsay, Chemical Engineering Department, A & M College of Texas, College Station, Tex.

The spring meeting will be held at the Baker hotel, featuring annual reports and committee meetings as well as the technical papers. The Governing Board will meet on Sunday, April 3, with N. D. Embree in the chair, and again on Wednesday afternoon, following the close of the technical and business sessions, with R. W. Bates presiding.



J. D. Lindsay

Report Safety Measures

Various speakers discussed their work for the Technical Safety Committee of the American Oil Chemists' Society at the September convention in Los Angeles, according to Paul R. Sheffer, chairman, who is with the Corn Products Company in Argo, Ill. Attendance numbered 22.

N. H. Witte, of the extraction plant subcommittee, reported on a study of NFPA #36 Standards for Solvent Extraction Plants which led to a policy of "tentative" for two years for the sake of considering revisions. Now made permanent by NFPA, #36 still needs further study in the opinion of the subcommittee, and Harvey Marxhausen will head a task force.

Accounts of five explosions, three from dust and two from hexane, were given at the committee meeting. None happened during operation, and it was thought that more care was required during start-ups, shut-downs, and repairs.

E. A. Gastrock mentioned that his subcommittee report on residual solvent in oil and meal was to be submitted to the Journal of the A.O.C.S. for publication. J. K. Sikes, chairman of the general plant subcommittee, told of an explosion from a car of raw soap stock. Hazards are found in hydrogenation, gas manufacture, and storage and dispensing of ammonia, he said.

R. M. Starr, chairman of the laboratory subcommittee, has resigned and been replaced by O. L. Brekke. New appointments to the Technical Safety Committee are E. R. Quinn, Anderson, Clayton and Company, Los Angeles; and H. E. Smith, Clinton Corn Processing Company, Clinton, Ia.

Active

- John Henry Baker, chemist, Wesson Oil and Snowdrift Company Inc., Bayonne, N.J.
- Harold W. Jackson, group leader, Fundamental Section, National Dairy Products Corporation, Glenview, Ill.
- Helmuth Erik M. Jorgensen, research physical chemist, Distillation Products Industries, Rochester, N.Y.
- David Kritehevsky, associate member, Wistar Institute, Philadelphia, Pa.
- Robert William Nex, chief chemist, Research Division, Process Chemicals Company, Santa Fe Springs, Calif.
- William M. Ramsey, chief chemist, Division of Victor Chemical Works, A. R. Maas Chemical Company, South Gate, Calif.
- Turan Sanlicetinsavas, research chemist, Suero-Chemical Division, Colonial Sugars Company, Gramercy, La.
- Francis W. Whalen, research chemist, Rath Packing Company, Waterloo, Ia.
- William E. Wimble Jr., technical representative, Atlas Powder Company, Chicago, Ill.

Corporation Associate

- Gold Kist Peanut Growers, Lewis L. Branscomb, chemist, Graceville, Fla.

Coleman to Inspect Standards

An offer from Coleman Instruments Inc. to accept all Coleman A.O.C.S. color standards from the field for a no-charge inspection is reported by R. C. Stillman, chairman of the Color Committee of the American Oil Chemists' Society, as part of the discussion of the committee meeting in Los Angeles in September.

If any of the standards returned are found to be defective in any way, Coleman Instruments will replace them at no charge. Standards should be sent to Coleman Instruments Inc., Attn. C. A. Rossiter, 42 Madison street, Maywood, Ill.

Nominations Close December 7

During the week of November 2 active members of the American Oil Chemists' Society were sent the nomination suggestion form, for use in recommending candidates for office during 1960-61. Deadline for returning the form is December 7. J. C. Konen, of Archer-Daniels-Midland Company, Minneapolis, is chairman of the Nominating and Election Committee.

Back Issues Needed

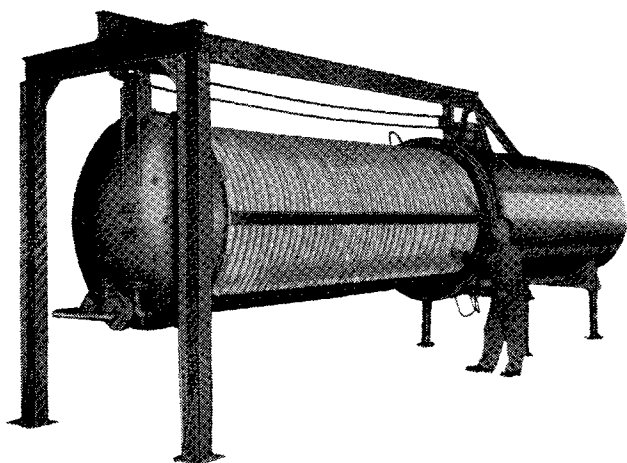
The circulation department of the Journal of the American Oil Chemists' Society would like to obtain copies of these issues: November 1950, November 1952, and January 1959, also of all issues prior to 1947. Anyone having any of these copies on hand is asked to correspond with the Society at 35 E. Wacker drive, Chicago 1, regarding donating or selling them. Shipment may be made express collect.

• 35 Years Ago

G. Worthen Agee wrote about the Proposed Changes in Inter-State Rules, referring to chapter X, Sampling Article 2, Method of Sampling, Rule 240, Cottonseed, in Vol. I, No. 2 of the Journal of Oil and Fat Industries.

J. J. Vollertsen was first vice president of the American Oil Chemists' Society in 1924-25.

Fred H. Smith, managing editor, urged readers to mention the Journal of Oil and Fat Industries "every time you write a manufacturer or dealer regarding probable purchases."



For Filtering Winterized Oils... Niagara PAYS OFF Three Ways

1 NO FULL-TIME OPERATOR NEEDED for each filter. A simple system of push-buttons and valves enables one man to handle an entire bank of these large NIAGARA filters. This unit has a filter area of 1,600 square feet and accommodates over 100,000 pounds of oil per day.

2 NO CLOTH WASHING OR SCRAPING because NIAGARA'S leaf design permits easy and complete cake removal. Filter cloth can be used cycle after cycle for 6 months to one year without washing or removal from filter leaf. Extended filter cloth life and the elimination of maintenance provide substantial savings.

3 NO REFRIGERATED ROOMS NECESSARY because of NIAGARA'S fully-jacketed design. Installation costs are lower.

Today, get the facts on NIAGARA time-saving, labor-saving economy. For details on filters built to your exact requirements, write about your problem to:

Niagara® FILTERS

A DIVISION OF

American Machine and Metals, Inc.

Dept. JO-1259, EAST MOLINE, ILLINOIS

(Niagara Filters Europe: Kwakelpad 28, Alkmaar, Holland)

Specialists in Liquid-Solids Separation

• New Books

CHOLESTEROL, by David Kritchevsky (John Wiley and Sons Inc., 291 pp., 1958, \$9.75). Cholesterol is unique among the lipids in having evoked such an enormous volume of both technical and lay writing in very recent years. Thus it is nearly impossible to follow the "literature" on cholesterol. In this setting a timely, concise monograph, such as this, is of inestimable value. Almost all aspects of cholesterol are carefully reviewed and evaluated. The author has drawn on his own wide background in organic chemistry as well as biology to select and emphasize work of particular importance.

The book is divided into seven chapters, an appendix, and an index. The first chapter entitled "Chemistry of Cholesterol" gives a detailed chemical proof of the structure of cholesterol. It also contains sections on the chemical reactions of cholesterol, the total synthesis of cholesterol, and a particularly valuable review on the preparation of isotopically labelled cholesterol. This chapter, as well as all succeeding ones, is followed by an exhaustively complete list of references.

Chapter two is on the biosynthesis of cholesterol. This aspect of biochemistry is in such rapid forward motion that almost any review of this type must become quickly outdated. Nevertheless there is basic information, which will always serve as a valuable introduction to a consideration of biosynthetic pathways. Chapters 3, 4, and 5 are on the absorption and transport of cholesterol, metabolism of cholesterol, and cholesterol in disease states. The conflicting evidence for and against cholesterol as the etiologic agent of atherosclerosis is presented in these chapters. But this presentation is probably of less value than the presentation of many well-founded details of cholesterol metabolism, dealing with such topics as the conversion of cholesterol to bile acids and to steroid hormones.

Chapter 6 deals with blood cholesterol. It contains a complete review of the known facts relating to the diet and the concentration of cholesterol in the blood of man and animals. The last chapter is a short but interesting review of the many available techniques for cholesterol analysis. Finally the book contains an appendix with physical constants for cholesterol, related sterols, and cholesteryl esters. There are also lists of the cholesterol content in foods and tissues.

This book appeared almost simultaneously with the collection of papers on cholesterol edited by Robert P. Cook (Academic Press, 1958). Certain items not emphasized in the Kritchevsky book are found in greater detail, e.g., the sterol requirements of protozoa and insects. But the Kritchevsky book has the great advantage of solitary authorship with its unity of style and approach. Both chemists and biologists who must keep abreast of developments in this field will find this book most valuable. The book should also have excellent service as an introduction to this exciting area of research.

JULES HIRSCH, Rockefeller
Institute, New York

PHOSPHORUS AND ITS COMPOUNDS. Vol. I. Chemistry, by J. R. Van Wazer (Interscience Publishers Inc., New York, 1958, \$27.50). This first volume presents a comprehensive summary of phosphorus chemistry while the companion volume, now in preparation, will emphasize phosphorus technology and applications. The restatement of phosphorus chemistry in Volume I is made from the inorganic point of view but points out similarities with, and differences from, carbon chemistry. Dr. Van Wazer believes that a new discipline of chemistry is emerging with rules sufficiently divergent from those of organic chemistry to justify separate description. It should be emphasized that the book is not limited in utility to inorganic chemists but will be found generally useful by all chemists. While an attempt has been made to include as much basic information as possible, the book does not review exhaustively all of the literature on phosphorus compounds.

The scope of the book is indicated by the table of contents: 1. The Phosphorus Atom, Its Nucleus and Electronic Structure; 2. Interaction between Atoms, with

Especial Reference to Phosphorus Chemistry; 3. Systematic Chemistry of Phosphorus and Its Compounds; 4. Elemental Phosphorus and the Metal Phosphides; 5. Hydrides, Halides, and Pseudohalides of Phosphorus and Their Organic Derivatives; 6. Oxides, Sulfides, Nitrides, and Related Compounds of Phosphorus; 7. Lower Oxyacids of Phosphorus, Their Salts and Esters; 8. Structure and Properties of the Condensed Phosphates; 9. Orthophosphoric Acid, Its Salts and Esters; 10. Individual Chain Phosphates (Pyro-, Tripoly-, Tetrapoly-, and Pentapolyphosphates as well as Kurrol's and Maddrell's Salts); 11. Ring and Branched Phosphates; 12. Amorphous Phosphates, Including Phosphate Glasses, Condensed Phosphoric Acids, and Phosphate Esters; 13. Halo-, Peroxy-, Thio-, and Amidoacids of Phosphorus, Their Salts, Esters, and Related Compounds.

A critical attitude has been exercised throughout. Where interpretations are tentative or controversial, the reader is so informed. The book is therefore recommended to all chemists who have need of a comprehensive picture of phosphorus chemistry as seen by one of the major contributors to that field during the past decade.

The book contains many suggestions for further research. For example, on p. 429 the author points out that dimetaphosphate rings are too unstable to be isolated at elevated temperatures where random reorganization is the rule. However he believes that this strained ring should be obtainable by positional syntheses at low enough temperatures.

A special problem for the student of phosphorus chemistry is the chaotic state of the nomenclature of phosphorus compounds. Organic and inorganic chemists often use different names for derivatives of the same compound. In fact, two organic or two inorganic chemists may do this. Of necessity the author has had to make his own choice, in order to write about the compounds. However sufficient description, including liberal use of structural formulas, has been given so that nomenclature problems should not constitute a barrier to understanding.

The book is well arranged and relatively free of errors.

OSCAR T. QUIMBY, The Procter & Gamble Company, Cincinnati, O.

COLORIMETRIC DETERMINATION OF TRACES OF METALS, by E. B. Sandell (Interscience Publishers, New York, edition 3, 1959, XXII + 1032 pp., illustrated, \$24). The excellence of the prior editions has been maintained by the author in his third revised and enlarged edition on trace metal analysis. The format, organization, and objectives of the book remain the same however. The revisions have been extensive throughout the entire book, and this volume is 50% larger than the previous edition. The text includes methods published through 1957 with 1958 addenda citations at chapter-ends.

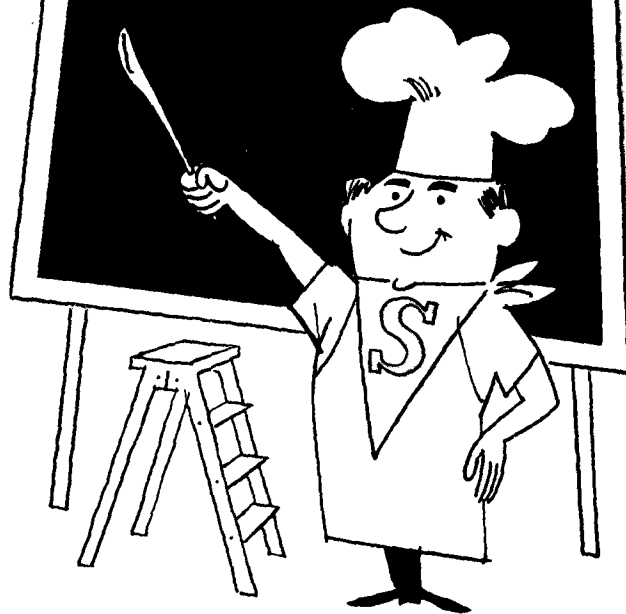
The general aspects of inorganic colorimetric analysis have been covered in the first 218 pages under Part I. The section on methods of separation and isolation has been enlarged and includes extensive discussion on extraction with various immiscible solvent systems, chemical precipitation and its congeners, chromatographic and ion exchange separation, indirect colorimetric analysis, and radioactivation. Chapter 4, devoted to general colorimetric reagents, has been revised and considerably enlarged. The properties and application of 17 important organic colorimetric reagents are presented, and a much enlarged and critical discussion (32 pages) is devoted to the theory, technique, and application of dithizone to trace metal analysis.

The major portion of the book (Part II) is given to the determination of heavy metals. A new chapter has been added on the determination of thorium. The author's aim has been to present relatively few methods, which he has examined critically, and to enlarge upon the discussion of separation techniques and the removal of interfering substances. The new section on preparation of biological materials and the inclusion of numerous references to the preparation of organic and biological samples indicates the extension of trace metal analysis to a great variety of materials. The author clearly describes each method and critically evaluates each procedure, giving limitations, interfering substances, and the suitability to various materials.

The extensive literature which the author has surveyed makes the book extremely valuable to any analyst. Litera-

Are you using the right antioxidant?

- ✓ Does it keep fat stable at ordinary temperatures?
- ✓ Carry through into cooked products?
- ✓ Stabilize fats in dry mixes?
- ✓ Give a high value in the Schaal oven?
- ✓ Stabilize fats contaminated by traces of metal?
- ✓ Prevent rancidity and conserve vitamin content of animal feeds?



Whatever your objectives in using antioxidants, there is a form and formulation of Sustane to do the job.

A major supplier of antioxidants to industry for more than 25 years, Universal is the developer of the most significant food antioxidant, BHA, and markets a variety of antioxidant formulations, each tailored to meet specific needs.

An outstanding Food Service Group at Universal is prepared to help you select and use the antioxidants best suited to your needs. For further information just write our Products Department.

Sustane®



made in 4 forms, 7 formulations . . . keeps lard and shortening fresh.



**UNIVERSAL OIL
PRODUCTS COMPANY**

30 Algonquin Road, Des Plaines, Illinois, U.S.A.

NOW OLEFIN - FREE...LOW AROMATICS!

*Extractors who check
the Boiling Range use*

ESPESOL Normal
HEXANE and HEPTANE

(152°–156° F Typical)

(201°–207° F Typical)

Get these narrow boiling range benefits:

- Maximum Oil Yield
- Better Solvent Separation
- Fewer Emulsion Problems
- No Solvent Residue in Meal
- Improved Operation at Higher Temperature
- Lower Aromatic Content (0.3 typical)
- Low Sulphur Content

Espesol Normal Hexane and Heptane are available for Short Notice delivery from all Eastern States' seven strategically located terminals—by truck, tank car, barge and drum. Call or write today!



Complete Information Furnished on Request

Eastern States Petroleum & Chemical Company

A Division of Signal Oil and Gas Company

U. S. Terminals:

Houston, Texas • Chicago, Illinois • East Liverpool, Ohio
Madison, Indiana • Brownsville, Texas • Savannah, Georgia
Carteret, New Jersey • Los Angeles, California

European Terminals:

Dordrecht (Rotterdam) Netherlands
Livorno (Leghorn), Italy

Post Office Box 5008—Houston 12, Texas—Phone WALnut 3-1651

New York Office: 10 Rockefeller Plaza, New York, Phone Circle 7-2520
Chicago Office: 1011 Lake St., Oak Park, Illinois, Phone Village 8-5410
Cleveland Office: 20800 Center Ridge Rd., Cleveland, Ohio, Phone EDison 3-0188
Louisville Office: 4th and Broadway St., Louisville, Ky., Phone JUniper 3-7634
Atlanta Office: 3121 Maple Drive, N.E., Phone CEdar 3-3227
Los Angeles Office: 110 S. Euclid, Pasadena, Phone MUrray 1-0278

ture citations are not mere reference numbers but in most cases include a clear concise statement of the pertinent facts relative to the discussion. These citations plus the use of notes at the end of a procedure make the book extremely useful and concise.

The book is an outstanding text for those engaged in various kinds of trace metal analysis. It is excellently written, remarkably free of typographical errors, and organized in a highly usable manner.

C. D. EVANS, Northern Utilization Research and Development Division, Peoria, Ill.

MANAGER SELECTION, EDUCATION, AND TRAINING, by Willard E. Bennett (McGraw-Hill Book Company Inc., New York, 210 pp., 1959, \$6). The author is an executive of the Cities Service Refining Corporation with much experience in the organization and administration of training programs for the development of men with managerial potentials.

Initially one is moved to question the necessity for the addition of another volume to the already massive literature in this field. Mr. Bennett realizes that this question will be asked, and his justification appears on page 10:

And here we come to the reason I have had the temerity to add yet another book on the subject to the already considerable literature. This book is the product of a deep-seated belief that manager development is marking time at a crossroads—a crossroads beyond which it will not advance appreciably until the underlying causes of the paradox of consuming interest on the one hand and dissatisfaction and uncertainty on the other are identified and understood. Not until this has been done can the problems giving rise to the causes be analyzed and workable solutions devised—solutions which in turn can be utilized in removing these causes and thus resolving the paradox which at present blocks progress so effectively.

This is an ambitious, indeed presumptuous, undertaking. For, in a sense, it is an endeavor to write "the book" which some authorities suggest has not as yet been written. Yet sooner or later it will be written, and if this effort falls short of the mark—as it well may—perhaps it will serve the purpose of helping the next aspirant, if not to hit the mark, at least to bring us closer to it.

A careful reading of the 10 chapters does indeed show that the author has brought together an excellent summary of the present status of his subject. Additionally, from his experience, he sets forth in an interesting and readable form a comprehensive plan for taking the guesswork out of the important management responsibility for personnel training and development so necessary for the continuing success of a business enterprise.

Undoubtedly most readers of this review will be interested in research and development. Certainly this reviewer can whole-heartedly agree that some tried and proved management principles are most useful in research administration. These must be adapted to the needs of the particular organization however, and it is certainly inviting trouble to prescribe any single program.

Personnel appraisal, stimulation of creativity, promotion of vitality in research, and communications are only a few of the problems which the research administrator faces today. While he may profit by reading Mr. Bennett's book and will perhaps discover some useful techniques, he may wisely conclude to utilize only those which are suited to his own special circumstances.

L. B. PARSONS, Lever Brothers Company, Edgewater, N. J.

CONTINUOUS ANALYSIS OF CHEMICAL PROCESS SYSTEMS, by S. Siggia (John Wiley and Sons Inc., 374 pp., 6 x 9 in., 1959, \$8.50). The book contains 24 chapters, beginning with an introduction which defines the field and following this with a chapter outlining the author's approach for setting up plant-control facilities. The remainder of the book deals with available instruments for continuous monitoring of chemical process systems. The chapters on instruments are titled according to the analytical principle employed and arranged to include specifications and applications of individual instruments. Each instrument is additionally described according to the principle of operation and essential operating data such as precision, accuracy, sensitivity, interferences, and range.

The material presented in this book has been gleaned from uncatalogued literature, technical bulletins of instrument companies, private communications with instrument designers, and journal articles. In this respect it is a unique contribution, in spite of the present rapid flux of instrumental design.

To analytical chemists specializing in instrumental analysis the book may be considered fundamental for it is concerned with on-stream analysis and not electronic circuitry. According to the author, the book is directed to the practicing analyst and to the engineer who is responsible for the establishment of plant controls. For the latter the author has compiled most of the information which will enable him to choose the best instrument for the particular application in which he is interested. For students of analysis and engineering the book may be considered an extension of the standard textbooks on instrumental analysis.

Other readers of this book will also find that it is well organized, well written, and well documented. The ingenuity of certain instruments will appeal to those who presumably have no interest in analytical control. The descriptions of relatively new continuous gas chromatography equipment will be of special interest to those concerned with monitoring gaseous streams. A list of manufacturers' addresses and a well-developed index lend convenience to the edition. The book will be a valuable addition to both analytical and engineering libraries.

WILLIAM E. LINK, Archer-Daniels-Midland Company, Minneapolis, Minn.

• *On the Educational Front*

Colgate-Palmolive Company and Rutgers Preparatory School have worked out a long-term lease under which a building has been constructed on the school's Elm Farm Campus at New Brunswick, N. J. The structure will serve now as a laboratory facility for Colgate and in the future as a classroom-laboratory unit for students.

MOISTURE

**MEASUREMENT
RECORDING
CONTROL**

**INSTANTANEOUS
CONTINUOUS**

ROGERS MOISTURE CONTROLLER

FOR: CONTROL OF MOISTURE IN GRANULAR MATERIALS SUCH AS MEAL, FEEDS, SEEDS, STARCH • ON A GUARANTEED BASIS.

TO: Increase Profits • Step Up The Efficiency Of Drying—Cooling Or Tempering Processes • Up-Grade Products • Speed Production.

**WRITE: ENGINEERING
MANAGEMENT, INC.**

**18 S. NORTHWEST HWY.
PARK RIDGE, ILLINOIS**

NEW! GIRDLER G-53 NICKEL HYDROGENATION CATALYST ...offers greater activity, selectivity and reuse

Applications. Girdler G-53 Catalyst is a *new* nickel hydrogenation catalyst for vegetable oil and animal fat applications. Has advantages for hard-to-hydrogenate oil products such as fish oils and for other oils with unusual contaminants.

Advantages. Outstanding selectivity and activity. And, in many applications, maintains selectivity and activity on repeated use far better than other catalysts of this type.

Girdler Catalysts' unsurpassed *quality control* in production of G-53 results in improved uniform performance.

Properties. G-53 is a nickel-on-kieselguhr catalyst, dry-reduced and suspended in hardened vegetable oil or tallow, depending on application needs. Consists of approximately 25 weight per cent nickel, 10 weight per cent support material and 65 weight per cent hardened suspending oil. Supplied in granular form, 100% passing through 4 mesh screen. Bulk density approximately 37 pounds per cubic foot.

Try it! Sample and more detailed information will be sent on request.

CATALYSTS FOR:
HYDROGENATION
SYNTHESIS GASES AND
HYDROGEN GENERATION
DESULFURIZATION
NEW CATALYTIC PROCESSES

GIRDLER CATALYSTS
LOUISVILLE 1, KENTUCKY
CHEMICAL PRODUCTS DIVISION • CHEMETRON CORPORATION





“Gotta check everything in making top-grade fatty acids!”

Fatty acids that meet a user's demanding specifications shipment after shipment are essential to the manufacture of consistently fine end products. Constant vigilance by the fatty acid producer is the only way to give the user what he needs in a raw material.

Even the most carefully selected fats and oils may vary considerably in composition as received. Therefore, the maintenance of product quality and uniformity in the fatty acid plant depends on controls and adjustments at each step of manufacture. Visual and analytical laboratory tests must be made on the material in process from beginning to end.

These tests furnish a guide whereby the material is cut and trimmed by removal of impurities, volatiles, residues and color bodies—until the finished product fits the desired specifications.

Laboratory tests are translated into plant control by suitable adjustments of pressure, temperature, vacuum and flow rates in order to expedite removal of all undesirable constituents from the material in process.

Manual adjustments and controls are inadequate for the continuous separations taking place. Automation is the only answer. Only by the proper combination of indicator-recorder-controllers, flowmeters and motor valves is it possible to make the minute adjustments necessary for the removal of undesirable components. These adjustments must take place minute by minute, hour by hour, day and night.

Stainless steel and aluminum pumps, lines, valves and tanks must be used in processing and storage. Containers—if they are steel drums—must have baked-on liners impervious to fatty acids. Paper bags and fiber drums impregnated with special lin-

ing materials serve the same purpose. And of course the user, too, must handle the fatty acids received with care.

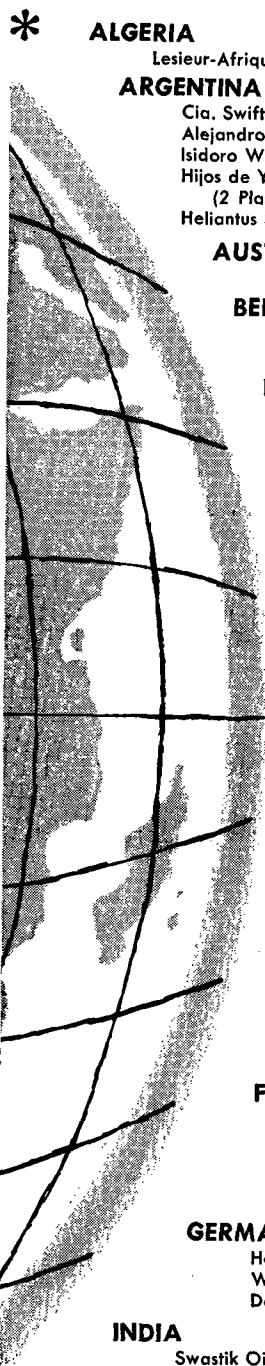
A. Gross & Company has been exercising this care in the manufacture of fatty acids since these compounds were first introduced commercially. The systems and safeguards developed over the years in the A. Gross plant, to assure exact adherence to demanding specifications, have helped to build A. Gross' reputation as a producer of top grade fatty acids. For information on A. Gross' fatty acids such as Groco Heat-Stable Red Oils & White Oleines, send for the brochure "Fatty Acids in Modern Industry."



295 Madison Ave., New York 17, N. Y. • Factory: Newark, N. J.
Distributors in principal cities • Manufacturers since 1837

Evaluate fatty acids made by A. GROSS—send for samples of: STEARIC ACIDS • RED OILS • WHITE OLEINES • TALLOW FATTY ACIDS • COCONUT FATTY ACIDS • VEGETABLE FATTY ACIDS • HYDROGENATED FATTY ACIDS • HYDROGENATED GLYCERIDES

VEGETABLE OIL REFINING PLANTS THROUGHOUT THE WORLD USING SHARPLES EQUIPMENT



* **ALGERIA**

Lesieur-Afrique

ARGENTINA

Cia. Swift de la Plata
Alejandro Bonfanti S. A.
Isidoro Weil y Cia.
Hijos de Ybarra (Argentina) S. R. L.
(2 Plants)
Heliantus S. R. L.

Molinos Rio de la Plata
Cia. General Fabril Financiera
Las Palmas del Chaco Austral

AUSTRALIA

Meggitt Ltd.

BELGIUM

Hulleries Vandemoortele S. A. Amato S. A. Belge
Ets. Labogras Nouvelles Huileries Anversoises

BELGIAN CONGO

Cie. Cotoniere Congolaise
Soc. Coloniale d'Huileries et de Raffinage

BRAZIL

Anderson, Clayton & Cia.
I. R. F. Matarazzo
S. A. Moinhos Riograndenses
Cia. Swift do Brazil, S. A.
Soc. Algodoeira do Nordeste Brasileiro S. A.
(2 Plants)
G. I. Minetti Gamba & Cia.
Dianda Lopez & Cia.
Joao Camara & Irmaos
Alimonda Irmaos
Cinbrasol

CHILE

Cia. de Industrias y Azucar de Chile

COLOMBIA

Fabrica de Aceites "Fagrove" S. A.

CUBA

Extractora Cubana de Aceites Vegetales, S.A.

DENMARK

Aarhus Oliefabrik
Dansk Sojakagefabrik

EGYPT

Egyptian Salt & Soda Company Ltd.

EL SALVADOR

H. de Sola y Hijos
Borgonova Hermanos y Cia.

FRANCE

G. Lesieur & Ses Fils
Huileries du Nord
Huileries Alsaciennes
Etab. Fournier-Ferrier
Galiniere
La Nourylande
Samagra
Ste. Carpentier-Lefevre
Savonnerie Coutant
"Geo" Foucault & Schweitzer

GERMANY

Holtz & Willemsen Oilfabrieken
Walter Rau Neusser Oelwerke A. G.
Deutsche Linoleum-Werke A. G.

INDIA

Swastik Oil Mills

ISRAEL

Izhar Oil Industries

JAPAN

Nihon Koyu Kogyo K. K.

IRELAND

Irish Oil & Cake Mills Ltd.

ITALY

Chiari & Forti Fratelli Berio
O. L. E. A. E. L. I. O. S.
Costa (2 Plants) Balestrini, S. A.

JORDAN

Jordan Vegetable Oil Industries Co.

MEXICO

Anderson, Clayton & Cia.
Industrias 1-2-3 S. A.
Industrias Gonzalez, S. A.
Industrias Unidas de "La Laguna"
Industrial Aceitera S. A.
Industrias Unidas de Nuevo Laredo
Fabrica de Aceites Hidrogenados y
Manteca Vegetal La Polar S. A.
Aceitera del Valle S. A.
Grasas Vegetales S. A.
Industrial Jabonera La Esperanza
Aceitera "La Gloria" S. A.
Fabrica de Aceites "La Palma" S. A.
Fabrica de Aceites "La Rosa" S. A.
Fabrica de Aceites "El Faro" S. A.
Industrias "La Victoria", S. A.
Mantequera de Monterrey S. A.
Industrias de la Pena S. A.
Hidrogenadora Ycateca S. A.
Industrias Perez Vargas S. A.

NETHERLANDS

N. V. Oliefabrieken J. M. Zwerver
Vereenigde Oliefabrieken-Zwijndrecht
Destructiebedrijf Overschie N. V. "Gekro"
N. V. Oliefabrieken Afd. Crok & Laan

PAKISTAN

E. M. Oil Mills and Industries

PERU

Cia. Oleaginosa del Peru, S. A.
Fabrica de Aceite La Pisquena

PORTUGAL

Soc. Nacional de Saboes Ltda.

PORTUGUESE EAST AFRICA

S. E. Ginwala Filhos Ltda.
Mocambique Industrial

SOUTH AFRICA

Epic Oil Mills

SPAIN

Exportaciones e Importaciones S. A.
Minerva S. A.

SWITZERLAND

Hautzentrale UND Fettschmelze

UGANDA

Colonial Oil Mills

UNITED KINGDOM

J. Bibby & Sons Ltd.
Southern Oil Co. Ltd.
(2 Plants)
Western Margarine Ltd.
English Fat Refining Co. Ltd.
Extractors (Hull) Ltd.
British Cocoa Mills Ltd.
Food Oils Limited
Smith Bros. & Co. Ltd.
William Forrest & Son Ltd.
North of England Lard Refiners
Vitamins Ltd.

URUGUAY

Compania Industrial de Aceites Comestibles

VENEZUELA

Mavesa S. A.
Grasas de Valencia
C. A. Industrial Productora de Grasas

* Partial List

THE SHARPLES CORPORATION

Centrifugal and Process Engineers

2300 WESTMORELAND STREET / PHILADELPHIA 40, PENNSYLVANIA
NEW YORK - PITTSBURGH - CLEVELAND - DETROIT - CHICAGO - HOUSTON - SAN FRANCISCO - LOS ANGELES - ST. LOUIS - ATLANTA
Associated Companies and Representatives throughout the World

Directory: ANALYTICAL • CONSULTING • ENGINEERING

F. R. ROBERTSON, Ph.C.
 A. H. PRESTON, B.S. O. M. BAKKE, B.Sc.
 Established 1904
HOUSTON LABORATORIES
 Analytical and Consulting Chemists
 311 Chenevert Street P. O. Box 132 Houston, Texas

LAW & COMPANY
 Consulting and Analytical
CHEMISTS
 Atlanta, Ga. Montgomery, Ala. Wilmington, N. C.

THE POPE TESTING LABORATORIES
 Analytical Chemists
 2618½ Main P. O. Box 903 Dallas, Tex.

ANALYSES • RESEARCH • DEVELOPMENT
 FATS, OILS, INSECTICIDES—GLYCERINE, SOAPS
 SYNDETS
 Available on Request:
 Price List for Fat and Oil Determinations
 Booklets on Bacteriology and Toxicology
 Attention Dept. RLM
SNELL FOSTER D. SNELL, INC.: Chemists
 Engineers
 29 West 15th St., New York 11, N. Y.

WOODSON-TENENT LABORATORIES
 Analytical and Consulting Chemists
 Main offices and laboratories: Memphis, Tenn.
 Other laboratories: Cairo, Ill., Chicago, Ill., Clarksdale,
 Miss., Des Moines, Ia., Little Rock, Ark., Wilson, Ark.

FOR: EXPANSION • MODERNIZATION
 IMPROVEMENT OF OPERATION
 CONSULTING • DESIGN • CONSTRUCTION

**ENGINEERING
 MANAGEMENT, INC.**

18 S. NORTHWEST HWY., PARK RIDGE, ILL.

SOLVENT EXTRACTION
 OIL PROCESSING
 FATTY ACIDS

Ask for our Publication and Price List if you
 are interested in back issues or reprints.

BARROW-AGEE LABORATORIES, INC.
 Analytical and Consulting Chemists
 and
 Testing Engineers
 Main Offices and Laboratories, MEMPHIS, TENNESSEE
 Other Laboratories: Shreveport, La. Decatur, Ala.
 Greenville, Greenwood and Jackson, Miss.
 Chattanooga and Nashville, Tenn.
 Little Rock, Ark.

CURTIS & TOMPKINS, LTD.
 Chemists—Samplers—Surveyors
 Serving the Vegetable Oil and Animal Fat Industry
 Official A.O.C.S. Referee Chemist—C. A. Lathrap
 236 Front St., San Francisco, Cal., EX 2-1130

The Fort Worth Laboratories
 Southwestern Laboratories
 Since 1912
 Consulting, Analytical Chemists
 and Testing Engineers
 Dallas RI-2-2248 Fort Worth ED-5-9321 Houston CA-8-9444

H A H N LABORATORIES
 Consulting and Analytical
 Chemists
 1111 Flora St. P. O. Box 1163 Columbia, S. C.

AMERICAN OIL CHEMISTS' SOCIETY
 35 East Wacker Drive Chicago 1, Illinois

Official Methods

1952 reprinting of 1946 edition (including Annual Revisions), 6 x 9 in., looseleaf, with binder.....\$21.00
 Methods only, \$15; binder only, \$6; 1947, 1948, and 1950 Revisions, \$1 ea.; 1949 Revisions, \$1.50 ea.; 1951 Revisions, \$1.25 ea.; 1952 Revisions, \$1.50 ea.; 1953 Revisions, \$1.25 ea.; 1954 Revisions, \$1.50 ea.; 1955, 1957, and 1958 Revisions, \$2.75 ea.; 1956 Revisions, \$2.25 ea. Postpaid.
 Please send remittance with Methods order.
 (Foreign prices: Methods, \$16; binder, \$7; Methods [with Revisions] and binder, \$23)

Official Supplies

Official Natural Bleaching Earth.....	4 lb. can	\$1.50
Official Activated Bleaching Earth		
	Approx. 3¾ lb. can	2.50
Official Diatomaceous Earth.....	1 lb. can	1.00
Aluminum Moisture Dishes.....	each	.12
100 for		8.00
Standard Salt Crude Glycerin.....		3.00

(F. O. B. Chicago)

★

Send Supplies Order direct to the A. S. LaPine Company, 6001 S. Knox Avenue, Chicago 29, Ill. (Do not send remittance with supplies order.)

It is requested that no order be placed for less than \$5 worth of merchandise, if possible.