

The Soybean Research Council

THE SOYBEAN RESEARCH COUNCIL has many ties to the American Oil Chemists' Society through its membership and related fields of interest. Officially the Soybean Research Council is a standing committee of the National Soybean Processors Association, but its work over the years has been of importance to the grower, processor, and consumer of soybean products. The functions of the Council are many and varied, ranging from agronomy to utilization. It is a somewhat unique organization in that in virtually no other American industry do processors maintain at their own expense a technical group whose basic purpose is to gather, evaluate, and distribute technical information for the benefit of the whole industry.



R. L. Terrill

The by-laws of the N.S.P.A. state that the president shall have the right to appoint the members of all standing committees, but in practice the Research Council passes on its own membership. It is made up not only of men from the various member firms but also may include representatives from independent organizations. R. G. Houghtlin, president of the N.S.P.A., sits in all meetings as an *ex-officio* member and correlates the activities of the Council with those of other N.S.P.A. committees and organizations.

Over the years many of the Council members have been active participants in the work of the American Oil Chemists' Society; for example, the immediate past chairman of the Council was Howard C. Black, currently a member of the Governing Board of the Society. A recently elected member is the editor of your Journal, A. Richard Baldwin. John Cowan, head of the Oilseeds and Protein Division of the Northern Utilization Research Branch of the U.S.D.A. at Peoria, has been a member of the Council for many years. Although no longer a member of the Council, Warren H. Goss was for many years prominent in its activities. In general, an attempt is made to maintain a balance between those members whose background and experience has been in soybeans and soybean oil meal, and particularly in the nutritional aspects thereof, and those whose training has been in oil processing and utilization. Many members have some background in both fields. In connection with the organizational character of the Council, it is of interest to note that its activities have been sufficiently successful so that the National Cottonseed Products Association has just established a similar group under the chairmanship of Harry L. Craig, presently chairman of the Soybean Oil Committee of the Soybean Research Council.

A. Richard Baldwin, Cargill Inc.
H. C. Black, Swift and Company
Everett Blasing, Pillsbury Mills Inc.
M. J. Brinegar, Allied Mills Inc.
J. Wayne Cole, The Glidden Company
John C. Cowan, Northern Utilization Research Branch, A.R.S.
H. L. Craig, The Buckeye Cotton Oil Company

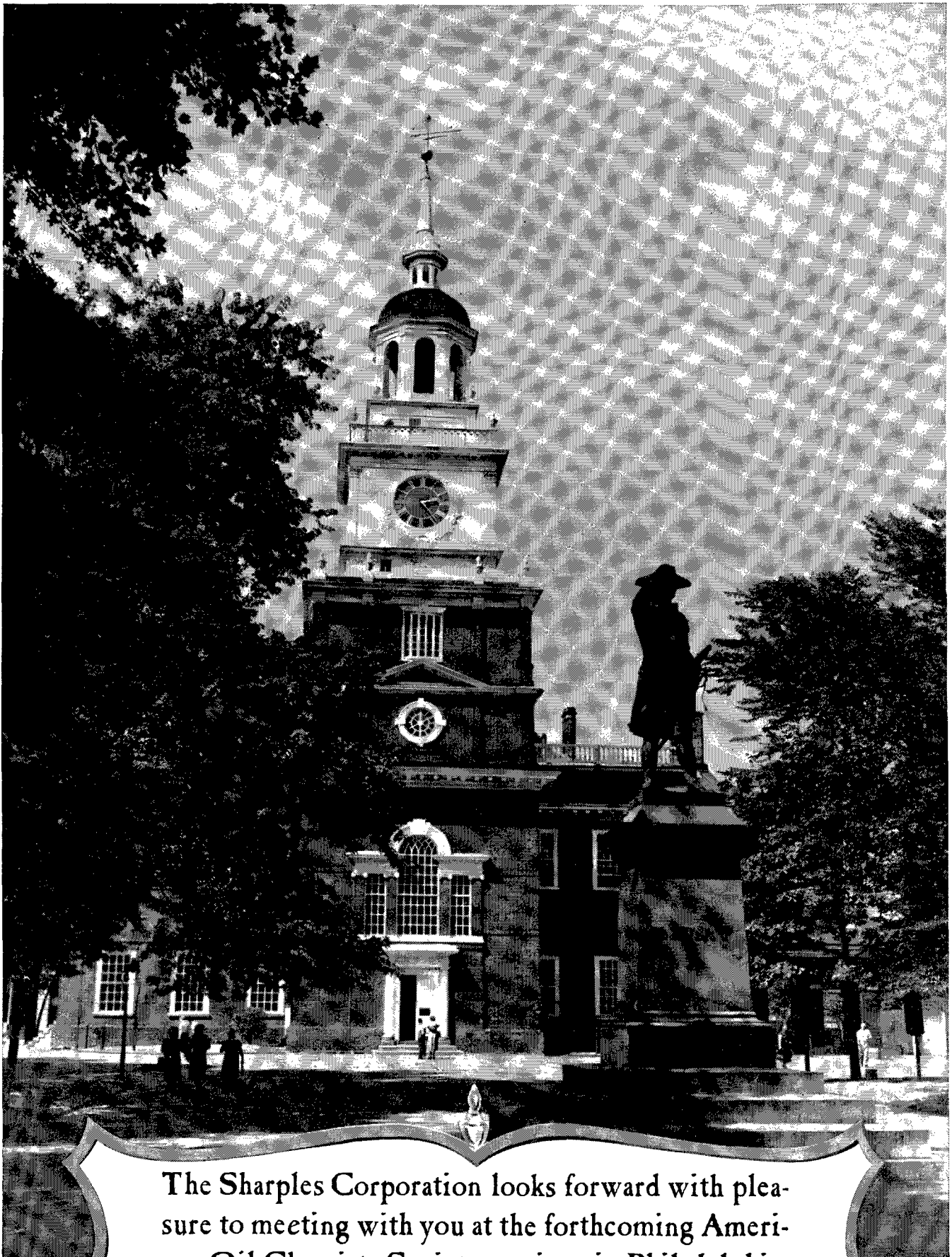
W. W. Cravens, Central Soya Company Inc.
Albert C. Groschke, The Borden Company
Fred H. Hafner, General Mills Inc., Chemical Division
J. W. Hayward, Archer-Daniels-Midland Company
L. P. Stewart, The Drackett Company
R. L. Terrill, Spencer Kellogg and Sons Inc.
Harold L. Wileke, Ralston Purina Company

VARIOUS ACTIVITIES of the Council are carried out through subcommittees, which have the responsibility for matters relating to publicity, literature, soybean oil meal, soybean oil, research relations, and new products development. Other groups and special committees are appointed to meet special needs.

The Publicity Committee is charged with the responsibility of providing reliable technical or semi-technical articles to trade journals. In recent years these have covered many subjects including the nutritional aspects of feeding soybean oil meal, the processing of soybean oil, the performance and interpretation of urease tests, etc. The Literature Committee surveys and prepares abstracts of articles appearing in both domestic and foreign scientific journals and distributes them periodically to the membership. Through its New Products Development Committee the Council keeps posted on the development of new processes and products involving the utilization of soybeans in one form or another.

The Soybean Oil Meal Committee of the Council has for many years carried out activities of great importance to the industry at large. Because of the importance of soybean oil meal in animal feed-stuffs the Council undertook an exhaustive collaborative program in an attempt to determine the effect of various types of processing on the nutritional quality of soybean oil meal and the question whether this nutritional quality could be predicted on the basis of chemical tests. Certain aspects of this study are continuing. It will be noted that this type of study is potentially of benefit to the entire industry, and the information derived can be applied by the smaller processor who might otherwise not have early access to such data. The Council attempts to establish the objectives of such studies so as to benefit the entire industry. It is also a responsibility of the Soybean Oil Meal Group to follow new developments in mixed feeds and the relationship of these to the utilization of soybean oil meal. For example, the

(Continued on page 28)



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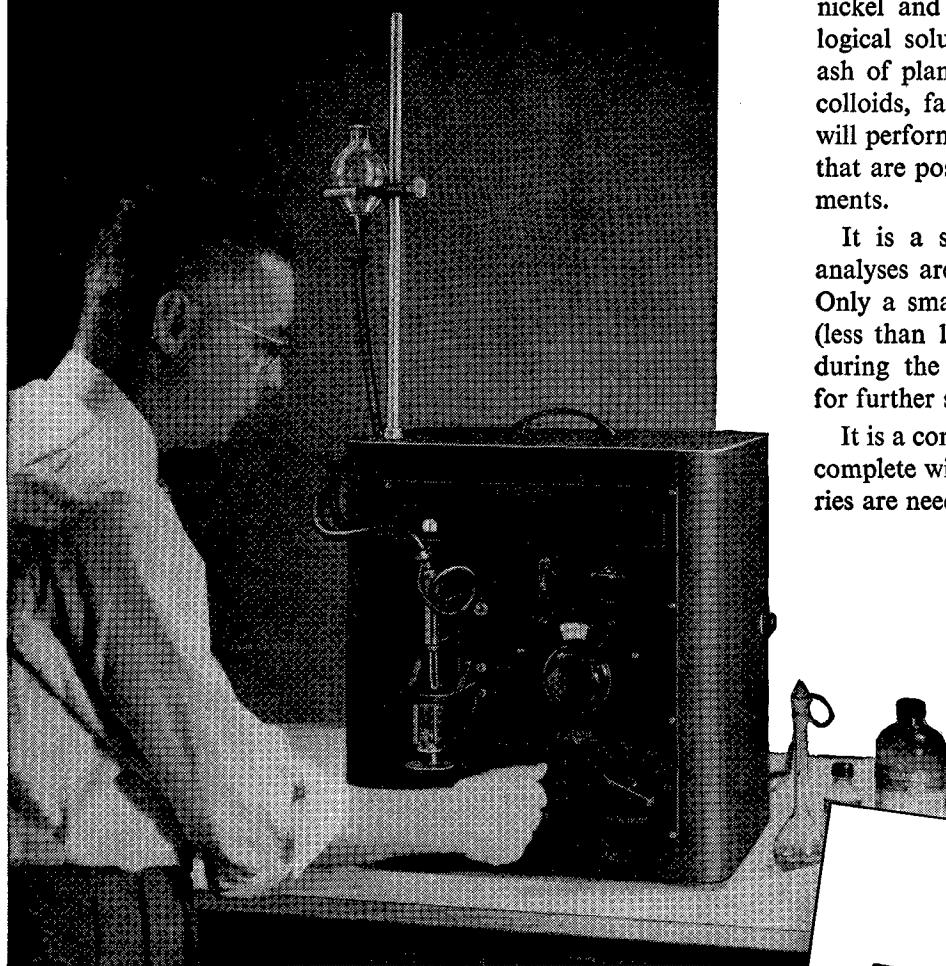
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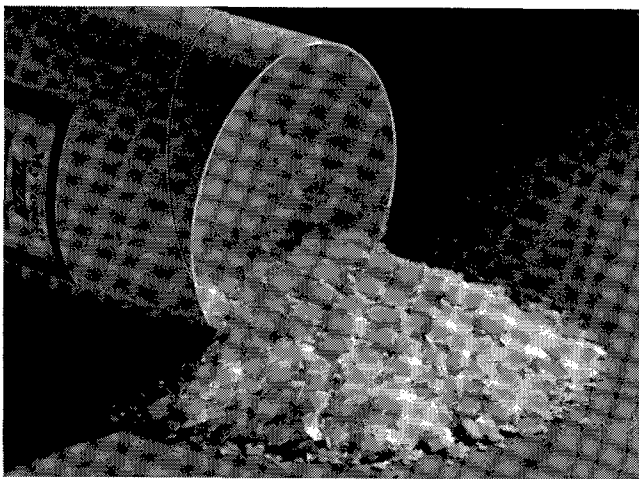
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Meetings

The sixth conference of the Analytical Chemistry Division, The Chemical Institute of Canada, will be held at the Guildwood Inn Motel, Sarnia, Canada, November 14-15, 1955. The theme of the conference will be spectrometry.

The annual meeting in 1956 of the American Society for Testing Materials, to be held June 17-22 at Atlantic City, N. J., will include an exhibit of testing and scientific apparatus and laboratory supplies. The second Pacific coast national meeting, also to include an exhibit, has been scheduled for September 16-22, 1956, at the Hotel Statler, Los Angeles, Calif.

The Society's next national meeting will be its committee week at the Hotel Statler, Buffalo, N. Y., February 27-March 2, 1956.

Several sessions devoted to safety in chemical plants will be held at the 43rd National Safety Congress and Exposition in Chicago, Ill., October 17-21, 1955. These include discussions on maintenance of chemical process equipment, prevention of fires and explosions by means of oxygen exclusion, handling of corrosives, air sampling to determine health hazards, and the prevention of dust explosions.

The program for the national convention and industrial exposition of the American Society of Tool Engineers, to be held March 19-23, 1956, at the International Amphitheatre, Chicago, Ill., includes a symposium on industrial diamonds.

One of the 50 sessions and symposia scheduled for the general meeting of the American Institute of Electrical Engineers, to be held October 3-7, 1955, at the Morrison hotel, Chicago, Ill., will be devoted to industrial power systems and the chemical industry.

The fifth annual sales clinic sponsored by the Salesmen's Association of the American Chemical Industry will be held at the Roosevelt hotel, New York, N. Y., on October 24, 1955, in conjunction with the association's annual dinner. The general theme of the clinic will be "Effective Selling of Chemicals."

People and Products

A new color-forming diazonium compound, stabilized in the form of a fluoroborate salt for use in paper chromatography, is offered by DISTILLATION PRODUCTS INDUSTRIES, Eastman Kodak Company, Rochester, N. Y.

General John E. Hull, former United States and United Nations commander-in-chief in the Far East, has been elected president of the MANUFACTURING CHEMISTS' ASSOCIATION INC.

E. H. SARGENT AND COMPANY, Chicago, Ill., offers a new Sargent-Malmstadt automatic titrator, following the successful instrumentation of H. V. Malmstadt's second derivative method for potentiometric titration.

Acetonedicarboxylic acid is available in pilot-plant quantities from CHARLES PFIZER AND COMPANY INC., Brooklyn, N. Y.

A new waterproof adhesive is being marketed by the A. E. STALEY MANUFACTURING COMPANY, Decatur, Ill., as Staybind Waterproof Corrugating Starch No. 5030, and by Penick and Ford Limited Inc., Cedar Rapids, Ia., as Douglas Waterproof Corrugating Starch No. 7. It was developed in conjunction with Koppers Company Inc., Pittsburgh, Pa.

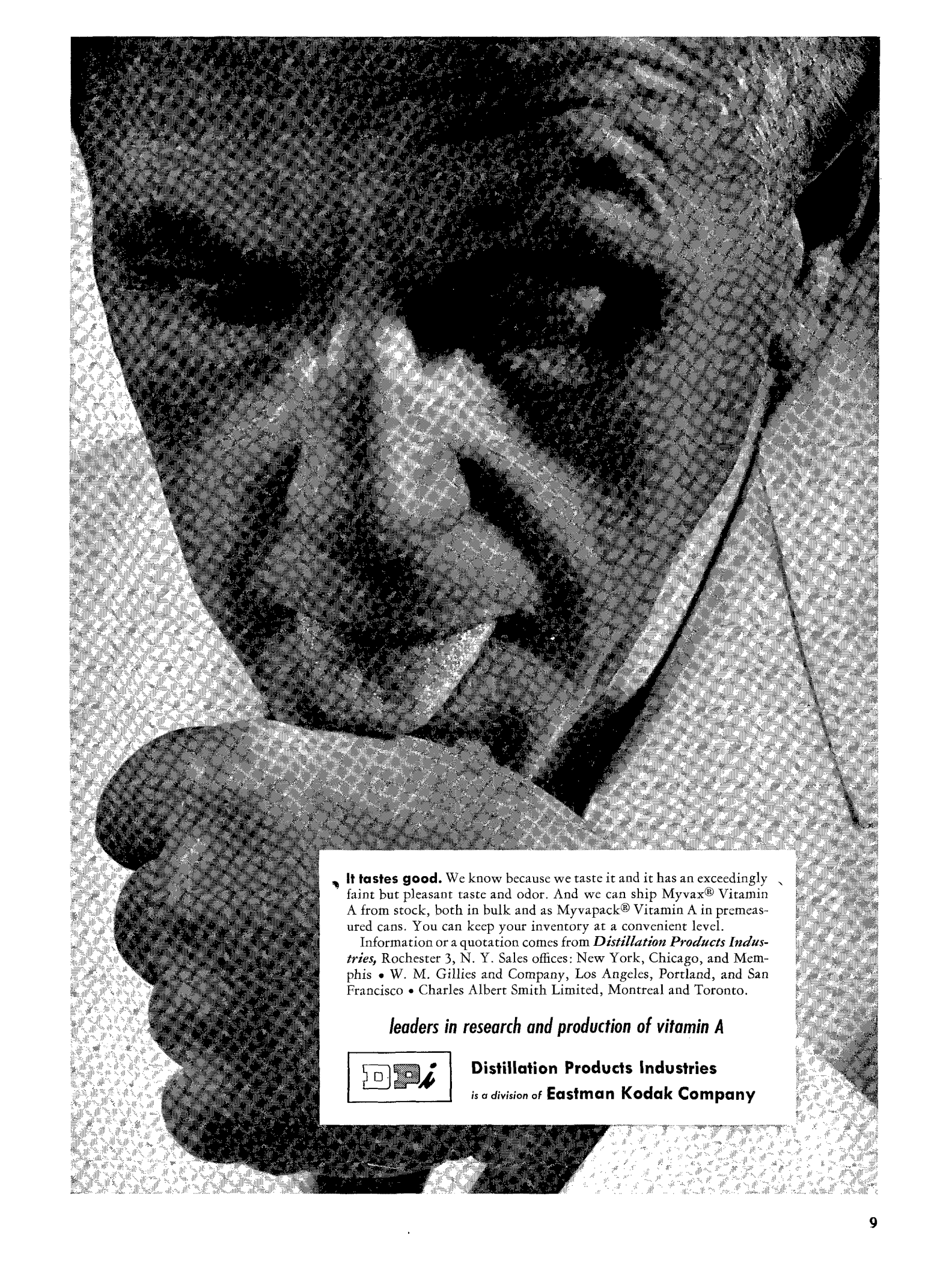
A new fraction collector for chromatography offered by SCHAAR AND COMPANY, Chicago, Ill., permits automatic collections by either the time-flow or the volumetric method.

Southland Cotton Oil Company, Paris, Tex., has become a division of ANDERSON, CLAYTON AND COMPANY INC., Houston. James R. Gill will continue as general manager.

A new three-specimen inverted spectrograph, designed so that the X-ray beam strikes specimens from below, is offered by the research and control instruments division of NORTH AMERICAN PHILIPS COMPANY INC., Mount Vernon, N. Y.

Set Chemical Sales Record

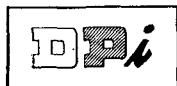
The total sale of chemicals and allied products during the first six months of 1955 was a record-setting \$11.5 billion, according to an announcement from the Manufacturing Chemists' Association Inc. This represents an 18% increase over sales for the same period in 1954.



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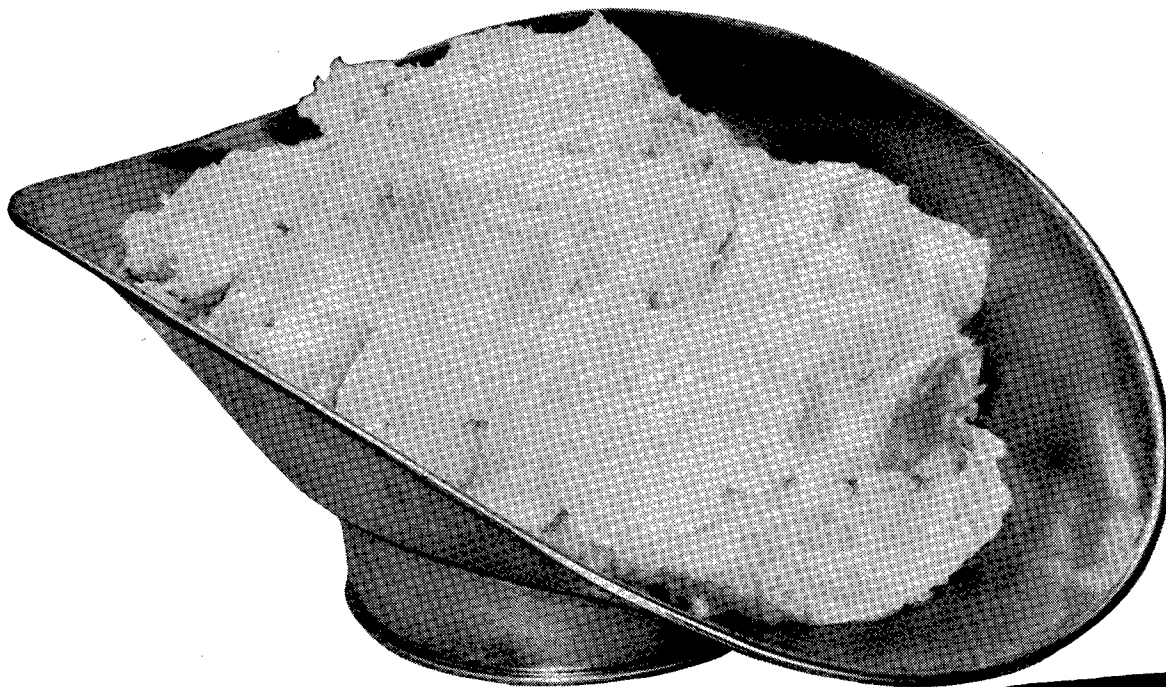
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We'll be glad to offer technical assistance in the use of Darco in your specific purification problem.



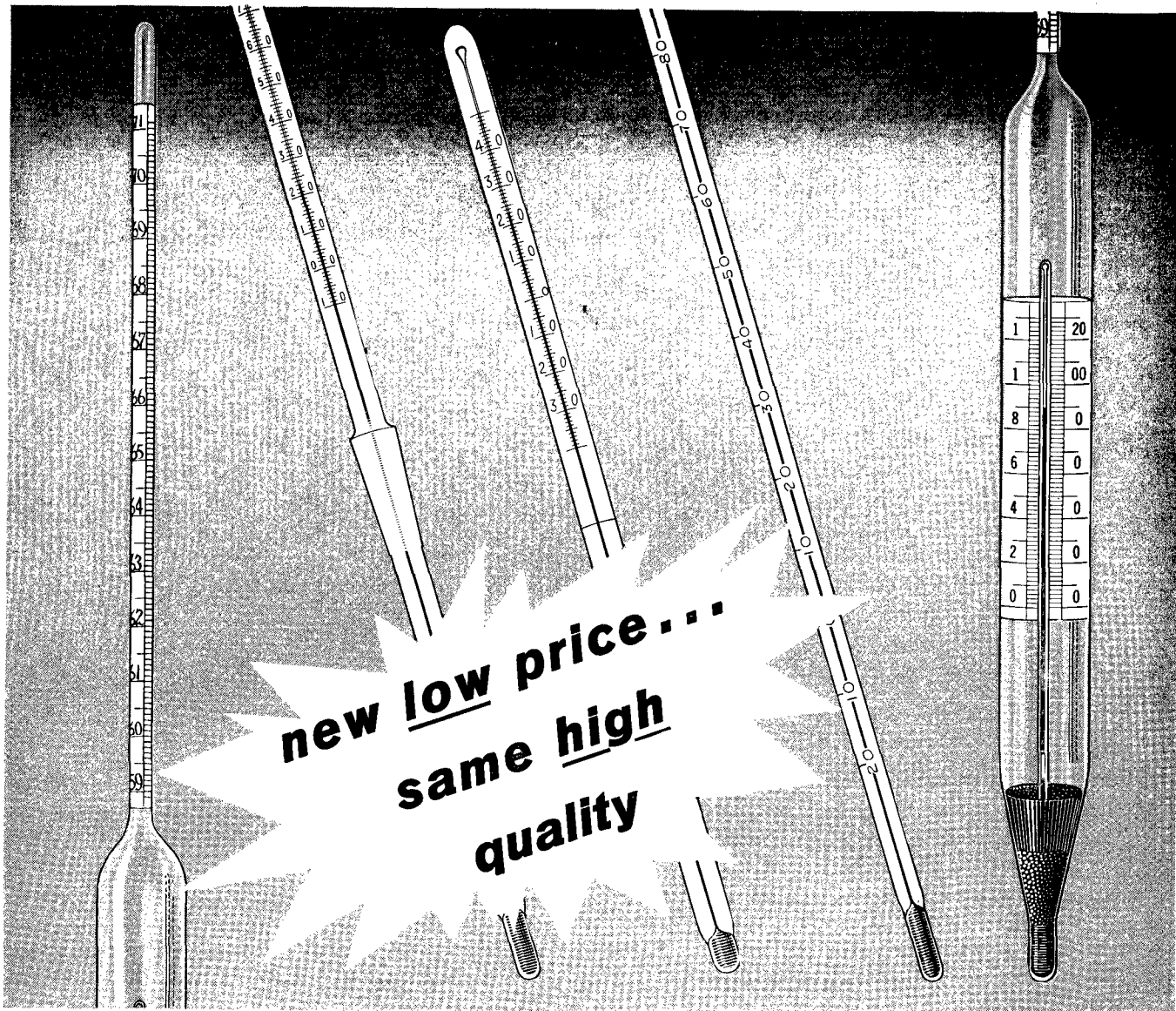
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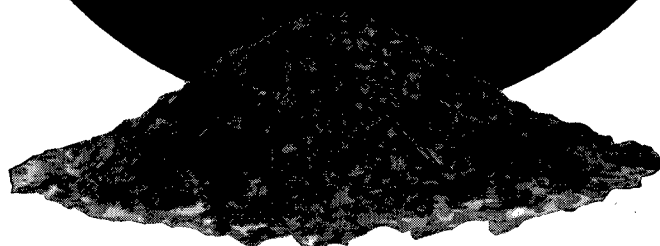
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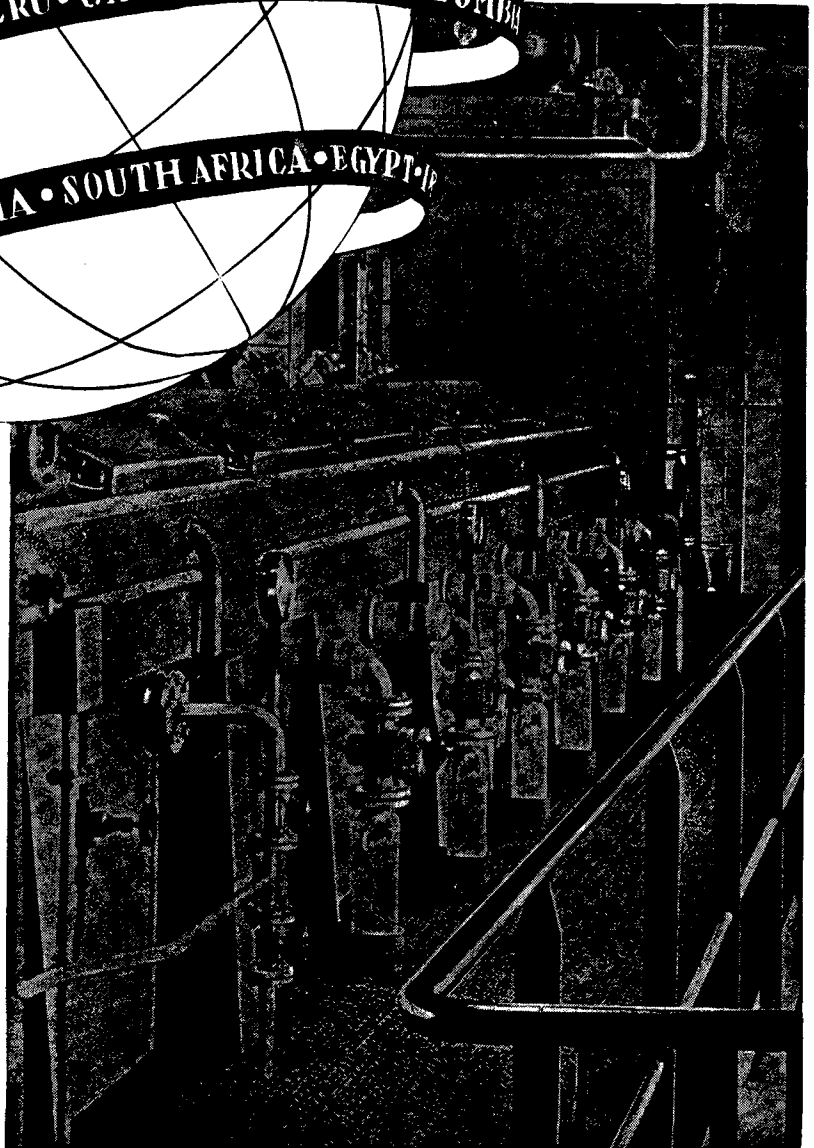
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NEWS

Announce Complete Program for Philadelphia Meeting

FOR THE BENEFIT of those who wish to know well in advance the nature of the technical program for the 29th annual fall meeting of the American Oil Chemists' Society, the program chairman, W. C. Ault of the Eastern Regional Research Laboratory, Philadelphia, announces final details. The meeting will be held October 10-12, 1955, at the Bellevue-Stratford hotel, Philadelphia, with P. E. Ronzone of C. F. Simonin's Sons Inc. as general chairman. The list of titles follows:



G. L. Prichard

Monday Morning, October 10

Call to order, by W. A. Peterson, president, 9:30 a. m.

Announcements and Welcome, by Mr. Ronzone

Detergents, J. Fred Gerecht, chairman

1. A Commercial Process for the Manufacture of Sucrose Esters of Fatty Acids, by

Lloyd Osipow, Foster Dee Snell, W. C. York, and Arthur Finchler, Foster D. Snell Inc., New York City.

2. The Effect of Soil Composition in Evaluation of Dishwashing Detergents, by F. J. Gozlow, V. J. Keenan, and B. J. Meehan, Atlantic Refining Company, Philadelphia, Pa.

3. Soil Removal by Dishwashing Detergents, by L. O. Leenerts, J. F. Pietz, and J. H. Elliott, Purex Corporation Ltd., South Gate, Calif.

4. Synthetic Detergents from Animal Fats. VI. Polymerizable Esters of α -Sulfonated Fatty Acids, by R. G. Bistline Jr., A. J. Stirton, J. K. Weil, and W. S. Port, Eastern Regional Research Laboratory, Philadelphia, Pa.

5. Preliminary Report on a Rapid Method of Evaluating Detergency by Means of an Ultrasonic Transducer, by W. C. White and J. C. Sherrill, Quartermaster Laboratory, Natick, Mass.

Monday Afternoon, October 10

Session A — Students, J. B. Brown, chairman

6. The Advantages of Specialized Training in Fat and Oil Chemistry, by F. A. Kummerow, University of Illinois, Urbana.

7. Opportunities in Lipid Chemistry, by W. O. Lundberg, Hormel Institute, University of Minnesota, Austin, Minn.

8. Chemical Engineering in Fat Technology, by C. E. McMichael, Girdler Company, Louisville, Ky.

Session A (cont.) — General, Dr. Brown, chairman

9. Countercurrent Distribution as a Tool for the Study of Glyceride Structure, by H. J. Dutton, J. A. Cannon, and C. R. Scholfield, Northern Regional Research Laboratory, Peoria, Ill.

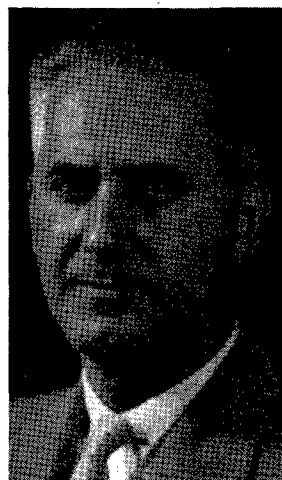
10. Glyceride Syntheses. III. Syntheses Involving 1-Monotrityl Glycerol, by C. G. Youngs, A. J. E. Porek, and B. M. Craig, Prairie Regional Laboratory, Saskatoon, Sask.

11. The Purification of Ricinoleic Acid, by E. M. Meade, University of Toronto, Toronto, Ont.

Session B — Analytical, T. H. McGuine, chairman

12. The Determination of the Position of Double Bonds in Unsaturated Fatty Acids and Esters by Means of Perman-

Speakers



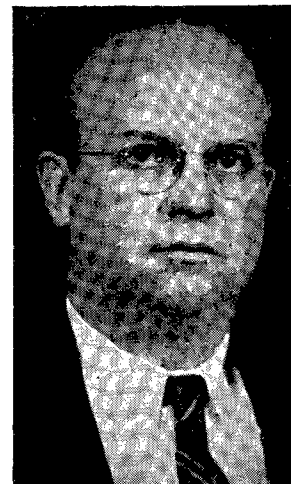
S. F. Herb



R. O. Feuge



F. D. Snell



A. J. Stirton



W. O. Lundberg



R. J. Vander Wal

ganate-Periodate Oxidation, by E. von Rudloff, Prairie Regional Laboratory, Saskatoon, Sask.

13. Nuclear Magnetic Resonance Spectroscopy of Long-Chain Alkyl-Benzenes, by R. D. Swisher, Monsanto Chemical Company, Boston, Mass.



H. J. Dutton



Daniel Swern



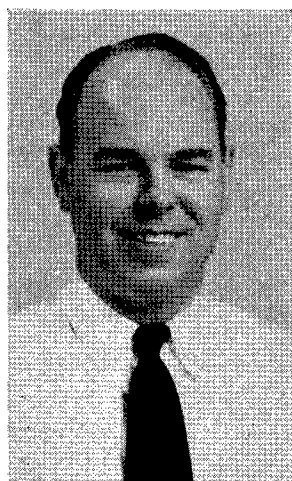
B. M. Craig



L. R. Dugan, Jr.



N. A. Khan



O. S. Privett

14. Direct Potentiometric Titration of Oxirane Oxygen by Hydrogen Chloride-Acetic Acid, by A. J. Durbetaki, Food Machinery and Chemical Corporation, Buffalo, N. Y.
15. Solvent Partition in the Separation of Hydroxy Acids, by E. M. Meade and (in part) T. A. Eloranta, R. C. Klingender, and Myra Hodgkinson, University of Manchester, England, and University of Toronto, Ont.
16. Polarographic Investigation of the Kinetics of Epoxidation of Unsaturated Fatty Acid Esters, by Constantine Ricciuti, L. S. Silbert, and W. S. Port, Eastern Regional

Research Laboratory, Philadelphia, and National Renderers' Association, Chicago, Ill.

17. Sealing Down of Some A.O.C.S. Methods to the Semi-Micro Range, by R. P. A. Sims, Canadian Department of Agriculture, Ottawa, Ont.
18. Unsaponifiables: Isolation, Properties, and Quantitative Determination, by N. A. Kahn, R. V. Coyne, and M. B. Visseher, University of Minnesota, Minneapolis.
19. Composition of Asparagus Seed Oil, by C. Y. Hopkins and Mary K. Chisholm, National Research Council, Ottawa, Ont.

Tuesday Morning, October 11

Session A — Technology, F. W. Keith, chairman

20. A Rapid Dielectric Method for Determining the Oil Content of Safflower and Sunflower Seeds, by R. M. Johnson, W. Haward Hunt, M. N. Neustadt, and Lawrence Zeleny, U. S. Agricultural Marketing Service, Washington, D. C.
21. Purification of Crude Glycerine by Ion Exclusion, by Glenn Prielipp, Dow Chemical Company, Midland, Mich., and H. W. Keller, Illinois Water Treatment Company, Rockford, Ill.
22. Alcoholic Extraction of Vegetable Oils. II. Solubilities of Corn, Linseed, and Tung Oils in Aqueous Ethanol, by L. K. Arnold and Rama Ranth Rao, Iowa State College, Ames.
23. Comparative Extraction Rates of Corn Oil by Three Petroleum Solvents, by L. K. Arnold, W. E. Rowe, and K. W. Van Den Berg, Iowa State College, Ames.
24. Effect of Exhaustive Solvent Extraction of Cottonseed on the Composition and Quality of the Crude Oils. II. High Oil Content Seed, by P. H. Eaves, J. J. Spadaro, A. J. Crovetto, V. O. Cirino, and M. F. Stansbury, Southern Regional Research Laboratory, New Orleans, La.
25. Solvent-Cooking of Cottonseed Meats for Extraction, by J. J. Spadaro and H. L. E. Vix, Southern Regional Research Laboratory, New Orleans, La.
26. Filtration-Extraction of Flaxseed as Affected by Preparation Variables, by N. B. Knoepfler, J. J. Spadaro, E. J. McCourtney, and H. L. E. Vix, Southern Regional Research Laboratory, New Orleans, La.
27. Meal Recycling Method of Solvent-Extracting Oilseeds of High Fat Content: Application to Filtration-Extraction of Peanuts, by Joseph Pominski, H. L. E. Vix, and E. F. Pollard, Southern Regional Research Laboratory, New Orleans, La.

Session B — Chemical Modification, J. T. Scanlan, chairman

28. Reactions of Conjugated Fatty Acids. II. Preparation of Conjugated Acid by Dehydration, by M. J. Danzig, L. E. Gast, J. L. O'Connell, Wilma J. Schneider, and H. M. Teeter, Northern Regional Research Laboratory, Peoria, Ill.
29. Reactions of Conjugated Fatty Acids. III. Kinetics of the Diels-Alder Reaction, by L. E. Gast, E. W. Bell, and H. M. Teeter, Northern Regional Research Laboratory, Peoria, Ill.
30. Some Reactions of Higher α -Bromo Fatty Acids, by R. R. Estes and Margaret Q. Bintzler, Emery Industries Inc., Cincinnati, O.
31. Reactions of Unsaturated Fatty Alcohols. I. Preparation and Properties of Some Vinyl Ethers, by E. J. Dufek, C. B. Coleman, H. M. Teeter, and J. C. Cowan, Northern Regional Research Laboratory, Peoria, Ill.
32. Recent Advances in *In Situ* Epoxidation Reactions with Resin Catalysts, by R. J. Gall and F. P. Greenspan, Rood Machinery and Chemical Corporation, Buffalo, N. Y.
33. Epoxidized Esters of Fatty Acids as Internal and External Plasticizers for Polyvinyl Acetate, by L. S. Silbert and W. S. Port, Eastern Regional Research Laboratory, Philadelphia, and National Renderers' Association, Chicago, Ill.
34. Epoxidation of Polyesters of Tetrahydrophthalic Acid and Unsaturated Alkyd Resins, by J. W. Pearce and John Kawa, S. C. Johnson and Sons Inc., Racine, Wis.
35. Acetylenic Compounds. II. Preparation and Properties of Stearolic Acid and Related Substances, by N. A. Khan, University of Minnesota, Minneapolis.

Tuesday Afternoon, October 11

General, R. W. Riemenschneider, chairman

36. Oils and Fats Situation, by G. L. Priehard, Bureau of Raw Materials, Washington, D. C.



F. A. Kummerow



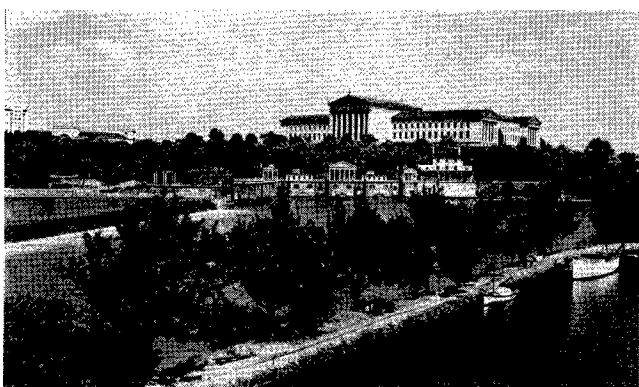
R. P. A. Sims

Shortenings, R. W. Riemenschneider, chairman

37. Some Recently Discovered Constituents of Animal Fats, by L. Hartman, Department of Scientific and Industrial Research, Wellington, N. Z.
38. Dilatometric Properties of Some Butyropalmitins and Stearins and Acetopalmitins, by N. V. Lovgren and R. O. Feuge, Southern Regional Research Laboratory, New Orleans, La.
39. Dilatometric Studies on Methyl Stearate, by B. M. Craig, Prairie Regional Research Laboratory, Saskatoon, Sask.
40. Some Observations on the Microscopy of Lard and Rearranged Lard, by S. F. Herb, M. C. Audsley, and R. W. Riemenschneider, Eastern Regional Research Laboratory, Philadelphia, Pa.
41. Beef Tallow in Shortening Preparation, by S. G. Morris, P. Magidman, F. E. Luddy, and R. W. Riemenschneider, Eastern Regional Research Laboratory, Philadelphia, Pa.
42. Procedure and Apparatus for Plasticizing Fats in the Laboratory, by A. H. Steffen and R. J. Vander Wal, Armour and Company, Chicago, Ill.
43. Directed Rearrangement as a New Processing Tool for Lard, by H. K. Hawley and G. W. Holman, Procter and Gamble Company, Cincinnati, O.

Wednesday Morning, October 12**Nutrition, B. F. Daubert, chairman**

44. Solubility and Heat Stability of Fat-Soluble Derivatives of Vitamin B₆, by Taketami Sakuragi and F. A. Kummerow, University of Illinois, Urbana.
45. Biological Effects of the Polymeric Residues Isolated from Autoxidized Fats, by H. Kaunitz, C. A. Slanetz, R. E. Johnson, Columbia University, New York City, and H. B.



ART MUSEUM—This shot of Central Philadelphia shows the Art Museum in the background.

Courtesy, Philadelphia Convention and Visitors' Bureau

- Knight, D. H. Saunders, and Daniel Swern, Eastern Regional Research Laboratory, Philadelphia, Pa.
46. A Comparative Study on the Nutritive Value of Thermally Oxidized Edible Oils, by O. C. Johnson, Taketami Sakuragi, and F. A. Kummerow, University of Illinois, Urbana.
47. The Relationship of the Degree of Unsaturation of the Dietary Fat to Atherosclerosis, by M. H. Chahine and F. A. Kummerow, University of Illinois, Urbana.
48. Further Studies on the Action of Plant Sterols in Cholesterol Absorption, by R. B. Alfin-Slater, A. F. Wells, Lilla Aftergood, and H. J. Deuel Jr., University of Southern California, Los Angeles.
49. Vitamin E: Studies on Their Stability in Different Laboratory Diets under Various Conditions of Storage, by M. B. Visscher and N. A. Khan, University of Minnesota, Minneapolis.

Wednesday Afternoon, October 12**Oxidation and Polymerization, W. C. Ault, chairman**

50. Reaction of Oxygen with Fatty Materials. XX. Recent Developments in the Autoxidation of Methyl Oleate and Other Monounsaturated Fatty Materials, by Daniel Swern and J. E. Coleman, Eastern Regional Research Laboratory, Philadelphia, Pa.
51. The Influence of High Intensity Radiation on the Oxidation of Oleic Acid and Methyl Oleate, by L. R. Dugan Jr. and P. W. Landis, American Meat Institute Foundation, University of Chicago, Chicago, Ill.
52. Concurrent Oxidation of Accumulated Hydroperoxides During the Autoxidation of Methyl Linoleate, by O. S. Privett and Christense Nickell, Hormel Institute, University of Minnesota, Austin, Minn.
53. The Chemistry of Polymerized Oils. V. The Autoxidation of Methyl Linoleate, by H. H. Sephton and D. A. Sutton, National Chemical Research Laboratory, Pretoria, South Africa.
54. The Chemistry of Polymerized Oils. VI. The Molecular Weight Distribution of Thermally Polymerized Oils, by C. A. J. Hoeve and D. A. Sutton, National Chemical Research Laboratory, Pretoria, South Africa.
55. Further Information on the Viscosity of Bodied Vegetable Oils, by R. P. A. Sims, Canadian Department of Agriculture, Ottawa, Ont.
56. Polymer Formation in Heated Vegetable Oils, by R. P. A. Sims, Canadian Department of Agriculture, Ottawa, Ont.

The meeting will have various social activities, including tours for the ladies, committee meetings, and a meeting of the Governing Board, Sunday, October 9.

New Members**Active**

- Eugene John Barry, chemist, Best Foods Inc., Bayonne, N. J.
 Decatur B. Campbell Jr., sales representative, Eastman Chemical Products Inc., Chicago, Ill.
 Max E. Cogswell, laboratory foreman, Procter and Gamble Company, Dallas, Tex.
 Robert L. Ferm, analytical chemist, Pillsbury Mills Inc., Minneapolis, Minn.
 Robert J. Foster, head, Chemical Engineering Research Department, General Mills Inc., Minneapolis, Minn.
 Edwin H. Johnson Jr., field engineer, Elliott Company, Chicago, Ill.
 Theodore J. Kight, foreman, Lubricant Control Laboratory, Celanese Corporation of America, Cumberland, Md.
 Charles Andrew Martin, group leader, R and D, Colgate Palmolive Company, Jersey City, N. J.
 Mark W. Weiss, director of Analytical Department, Interchemical Corporation, New York, N. Y.

Individual Associate

- Gordon James Chamberlin, managing director, Tintometer Ltd., Salisbury, England.

Corporation Associate

- Guillermo Mohr E. Hijo Suc., Guillermo Mohr B., representative, Mazatenango, Guatemala.
 Molino de Aceites, Gabriel Velasco Fernandez, representative, H. Matamoros, Tamaulipas, Mexico.

New Literature

The leading article in Volume 7, Number 2, of *Scientific Apparatus and Methods*, published by E. H. Sargent and Company, Chicago, Ill., is entitled "Automatic Titration Instrumentation."

Two information bulletins on precipitated calcium carbonates have been issued by the silicate, detergent, and calcium division of Diamond Alkali Company, Cleveland, O.

An annual report in the form of a 53-page illustrated booklet entitled "Scientific Research Activities of Mellon Institute, 1954-1955," has been prepared by E. R. Weidlein, president of the Institute.

Precision Scientific Company, Chicago, Ill., has published Data Sheet 11524 on a redesigned solvent recovery still.

Fatty Acids Drop

Production of fatty acids in June 1955 totalled 34.8 million lbs., somewhat below the high level recorded in May but well ahead of 1954 production figures. June production was 7.4% below that of May 1955, but 18.8% more than the June 1954 figure of 29.3 million lbs.

Total disposition was 37.5 million lbs., approximately 3.7 million lbs. under the May figures, but some 8.1 million lbs. above the June 1954 level. This included some 2.8 million sales within the industry so that apparent disposition is somewhat higher than actual. Stocks, including work in process, increased to 41.5 million lbs.

Adopts Steel Container Standards

Recommended universal standard specifications for steel shipping containers have been adopted by the metal packages committee of the Manufacturing Chemists' Association. Developed in cooperation with the technical advisory committee of the Steel Shipping Container Institute, the standards were established to reduce wide variations in container design specifications.

They are expected to improve handling and shipping of chemicals and to speed up orders for new containers. During 1954 the chemical industry used 35% of all new drums and 17% of all pails produced.

H. J. Deuel Lectures in England

Harry J. Deuel Jr., dean of the graduate school and professor of biochemistry at the University of Southern California, Los Angeles, is at the Dunn Nutritional Laboratory in Cambridge, England, on a Fulbright lectureship grant which began September 1, 1955.

Dr. Deuel left the United States on July 19 in order to attend a conference on fats held July 28-30 in Ghent, Belgium, and the third International Biochemical Congress on August 1-6 in Brussels. He also attended a conference on Vitamin E in Venice, Italy, September 5-7, and a conference on Biochemistry in Aberdeen, Scotland, September 13.

Dr. Deuel will visit several British universities during his seven-month lectureship to speak on vitamins A and E, the nutritive value of fats, essential fatty acids, cholesterol metabolism, chemical food additives, and protection against X-rays offered by fats in the diet.

E. J. Fox is assistant works manager at Carbide and Carbon Chemical Company, a division of UNION CARBIDE AND CARBON CORPORATION, New York, N. Y.

A.O.C.S. CALENDAR

1955

Fall Meeting: Bellevue-Stratford Hotel, Oct. 10-12, Philadelphia

1956

Spring Meeting: Shamrock Hotel, Houston, Apr. 23-25
Fall Meeting: Sherman Hotel, Sept. 23-26, Chicago

1957

Spring: New Orleans; Fall: Cincinnati

1958

Spring: Memphis; Fall: Chicago

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New Books

THEORETICAL ORGANIC CHEMISTRY, by P. H. Hermans, edited and revised by R. E. Reeves (Elsevier Press, 402 Lovett Blvd., Houston, Tex., 507 pp. 1954, \$9.75). Bound in cloth; type clear and legible; format in general excellent. The volume contains 26 chapters and covers the following subject-matter: molecular geometry and stereochemistry; atomic and molecular structure; polarizability and polarity; atomic and molecular interaction with electromagnetic radiation and with electrostatic and magnetic fields; ionization and interaction of molecules; intramolecular transformations; carbonium ions; substitution and addition reactions; esterification and ester condensations; kinetics; catalysis by acids and bases; effects of substituents on properties; aromatic substitution; free radicals; and redox systems. An appendix devoted to a brief discussion of quantum-mechanical theory is included. Both an author and an adequate subject index are included. The latter gives bold-face page numbers for principal references, a very desirable feature.

In his preface the author sets himself the task of reviewing developments in theoretical organic chemistry during the past 25 years; this objective he has achieved most successfully. His coverage is very broad, and he has not attempted detailed or complete discussion on specific topics. For the benefit of those who may wish to read more detailed discussions, ample references to the classic works in theoretical chemistry are included, both within the text and at the end of the various chapters. The subject-matter is up-to-date and leaves an impression of impartial presentation. So far as the reviewer is aware, no other volume available offers the broad yet fairly elementary review of modern concepts of theoretical organic chemistry which is provided by Dr. Hermans' book.

The book is recommended to the organic chemist who has not found it possible to keep abreast of the development of modern theory yet who is interested in obtaining at least a superficial understanding of current thinking. It provides an excellent general review for the graduate student. The usefulness of the 12-page discussion of quantum mechanics is questionable however.

Although this volume probably offers little that can be specifically applied to the immediate problems of the majority of

oil chemists, it is an excellent source for those desiring a better understanding of the phenomena encountered even in the practical application of organic chemistry. The sections on autoxidation, isomerization, esterification, and reactions of the double bond are of particular interest.

The volume contains a fair number of errors, typographical and other. The list of *errata* accompanying the reviewer's copy is far from complete. Apparently only the early pages were read critically after publication. The presentation is frequently awkward although in no instance does lack of clarity result. The more critical reader will note the use of less proper wording ranging from "while" (meaning: although, whereas, or and) to such phrases as "concensus of opinion between all authors." (p. 85.)

Structural formulas are not consistently drawn, particularly with respect to aromatic rings. Aromatic unsaturation may or may not be shown as for instance in the last equation on p. 250 and the first on p. 251. In some instances it is not immediately clear whether an aromatic or an alicyclic structure is intended. Atoms in cyclic structures may or may not be drawn within the ring hence the intersection of two bonds may not indicate a carbon atom.

These relatively minor errors do not seriously detract from Dr. Hermans' valuable contribution to chemical literature.

H. J. HARWOOD
Armour and Company
Chicago, Ill.

MARGARINE, by A. J. C. Andersen (Academic Press of New York, or Pergamon Press Ltd., London, 318 pp., 1954). This book supplies a real need in the margarine industry since it is the only comprehensive work of its kind. The book is modern and describes up-to-the-minute practices both with respect to formulation and processes in the industry.

The book is divided into eight chapters, with the two largest chapters covering raw materials and processing. In addition, other chapters deal with introduction and history, storage and preservation, process control, legislation of the various countries respecting margarine. Still another chapter treats of layouts under the designation of factory plans. In addition, there is a very excellent bibliography, comprising 213 references to publications and patents bearing on the subject.

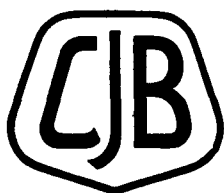
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Since the author's experience has been primarily associated with the European margarine industry, the book deals largely with European processes and formulas. The author however is thoroughly familiar with the principles of emulsification, fat crystallization, and the development of flavor, either through culturing of milk or the use of artificial materials. All of these points are fundamental to the manufacture of margarine wherever it is made.

The book also refers sufficiently to American practices and American equipment so that it is not lacking in this respect.

It is evident that the wealth of knowledge contained in this book is a result of the author's personal experience in the field. It is this reviewer's opinion that the book is of great value to all those interested in the field of fats and oils, and a necessity for the operating and technical man directly connected with the margarine industry.

L. C. BROWN
Swift and Company
Chicago, Ill.

GLASS REINFORCED PLASTICS, by Phillip Morgan, editor (Philosophical Library Inc., New York, 1954, 248 pp., \$10). The book is composed of 15 chapters, by as many British authors, treating the resins, reinforcing materials, and production methods used in glass reinforced plastic structures. While the polyester resins are discussed in greatest detail, none of the commercial resins are ignored.

With the rising importance of glass reinforced molding in the last five years, the need for assembled information on materials and techniques is acute. Editor Morgan has recognized this in his foreword, and the first six chapters are a discriminating collection of the information one might find dispersed in manufacturers' technical literature. There are discussed resins and their chemistry, fibers, fillers, inhibitors and catalysts, and test methods.

Chapters VII through X deal with molding and production techniques and design of structures while the remaining chapters explain the role of reinforced plastics in the aircraft, electrical, automotive, marine, and miscellaneous fields. There is an adequate subject index.

Comparative merit is hard to assess in a field where so few volumes have been written, but this one appears the most complete to date. Epoxide resins are treated rather lightly, possibly because they had not become important in Great Britain at the time of publication.

Glass Reinforced Plastics will interest anyone wishing to gain background knowledge in the field, particularly the professional or serious amateur craftsman who plans fabrication work with reinforced resins.

ROBERT F. HELMREICH
Dow Chemical Company
Midland, Mich.

Expansion

John J. Emery, president of EMERY INDUSTRIES INC., Cincinnati, O., officiated at ceremonies opening the new Twitchell Memorial Laboratories. Dedicated to Ernest Twitchell, Emery's first research chemist, the new three-story building houses 28 individual laboratories.

The chemical division of GENERAL MILLS INC., announces the opening of a new district office in Kansas City, Mo.

BECCO CHEMICAL DIVISION, Food Machinery and Chemical Corporation, announces expansion programs at plants in Buffalo, N. Y., and Vancouver, Wash. Both produce hydrogen peroxide.

Construction of a mercury cell chlorine-caustic soda plant at Brunswick, Ga., is planned by Solvay Process Division, ALLIED CHEMICAL AND DYE CORPORATION.

The division of E. H. SARGENT AND COMPANY at Detroit, Mich., in operation since 1942, is building a new one-story warehouse with offices and demonstration laboratory facilities. It is the fourth modern plant built in the past seven years by Sargent. Divisions were opened at Dallas, Tex., in 1948 and at Birmingham, Ala., in 1954. In 1949 the main headquarters in downtown Chicago were moved to a new three-acre building on the northwest side.

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On the Educational Front

The chemical education committee of the American Chemical Society, Philadelphia section, will present a continuation course on Fats and Detergents at the Philadelphia College of Pharmacy and Science. Lectures will be given each Monday evening for 11 weeks, beginning October 3, 1955.

Myron L. Bender, assistant professor of chemistry at the Illinois Institute of Technology, Chicago, received a travel grant from the National Science Foundation which enabled him to attend the 14th International Union of Pure and Applied Chemistry at Zurich, Switzerland, July 21-27, 1955.

Appointments

Paul J. Nowacki has been named as North Central representative for the Expeller and Solvent Extraction division of V. D. Anderson Company, Cleveland, O.

Appointments in the technical service department at CHARLES PFIZER AND COMPANY INC., Brooklyn, N. Y., include Robert C. Ottke, manager of the development section, and John K. Shaw, manager of the industrial section.

PODBIELNIAK INC., Chicago, Ill., has named Arnold M. Gavin as senior chemical engineer in the newly created fats and oils section.

EILEEN A. WELCH has joined the staff of R. T. Vanderbilt Company, Norwalk, Conn.

New staff members in the market development group at AMERICAN CYANAMID COMPANY, New York, N. Y., are John B. Bell and Raymond H. Mattson, market research department, and Abbott M. Swift, new product development department.

Julius W. Dieckert has joined the staff of the SOUTHERN REGIONAL RESEARCH LABORATORY, New Orleans, La., as leader of a project to extend the use of peanuts.

THE BAKER CASTOR OIL COMPANY, Bayonne, N. J., announces the appointment of Harold Zinnes to its technical division staff, new products department.

Russell L. Maycock is the new director of the SHELL CHEMICAL CORPORATION research laboratory at Houston, Tex.

Robert G. Picard has joined CENTRAL SCIENTIFIC COMPANY, Chicago, Ill., as director of research and engineering development.

Herman Brown has joined the staff at A. E. STALEY MANUFACTURING COMPANY, Decatur, Ill., as a research chemist in the technical service department.

Offers Achema Yearbook

Copies of the Achema Yearbook 1953/55 are now available from Dechema Deutsche Gesellschaft für Chemisches Apparatesen, Rheingau-Allee 25, Frankfurt am Main W. 13, Germany. The 764-page, trilingual volume (English, French, and German), contains a 376-page section giving sources of supply for some 6,000 items of chemical apparatus and equipment. Also included are reports on the activities of 26 European technical universities.

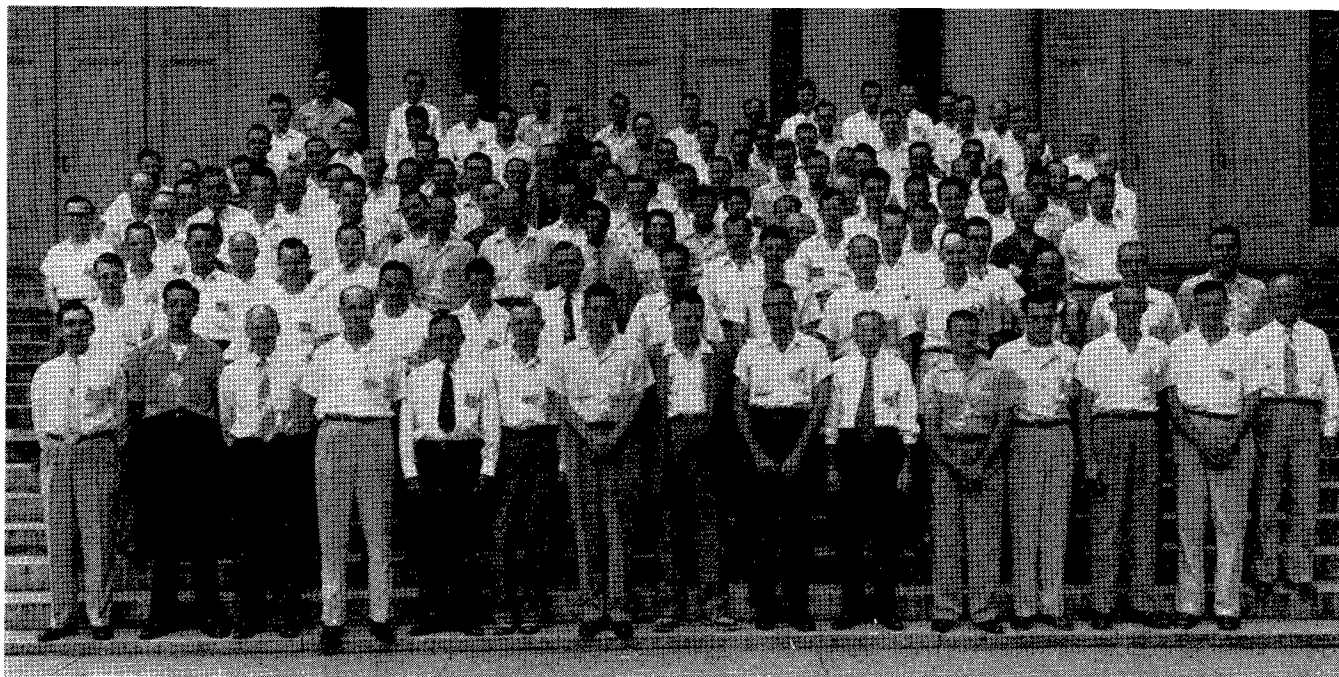
All registered visitors to the Achema XI Congress, held in Frankfurt am Main in May, received a copy of the Yearbook, the price of which was included in their fee. The few remaining copies are available to non-members at 35 DM each, plus postage and packing charges.

In September 1920

T. C. Law asks for contributions to a new department entitled Personal Items and News Notes to the Chemists' Section of The Cotton Oil Press.

R. H. Fash of the Fort Worth Laboratories reports briefly on Some Bleach Test Results.

K. S. Gibson, associate physicist, National Bureau of Standards, writes an article entitled "The Infrared Absorption Spectra of Vegetable Oils."



SHORT COURSE—Gathered for a group photograph are these students, speakers, and committee at the 1955 short course on analytical techniques at the University of Illinois, Urbana, August 1-5.

Short Course Well Attended

THE SEVENTH SHORT COURSE of the American Oil Chemists' Society was held at the University of Illinois in Urbana, August 1-5, 1955, on Analytical Techniques. Attendance consisted of 113 full-time registrants and 23 speakers.

An informal get-together at a private dining room in an off-campus hotel at the end of the first day of classes helped to "thaw out" everyone. The moist, Bombay-like heat had contributed substantially to this process; however the classes were held in an air-conditioned building on the campus, attracting a remarkably high attendance record at each session.

An open house on Tuesday evening gave an opportunity for everyone to look over the soybean laboratory and the new fat and oil research laboratories in the Animal Sciences building. On Wednesday afternoon everyone played hookey at beautiful Robert Allerton Park and consumed large quantities of fried wall-eyed pike after an afternoon stroll through the formal gardens and woods. The customary banquet on Thursday evening gave everyone a rare opportunity to pick up a new stock of jokes and funny stories.

In spite of the seemingly crowded agenda of entertainment, methods useful in fat and oil analyses received their full share of attention. These involved the practical problems encountered in routine analyses as well as the latest techniques in research. All of the lectures will be published in the October issue of the Journal of the American Oil Chemists' Society. Bound reprints will be available later.

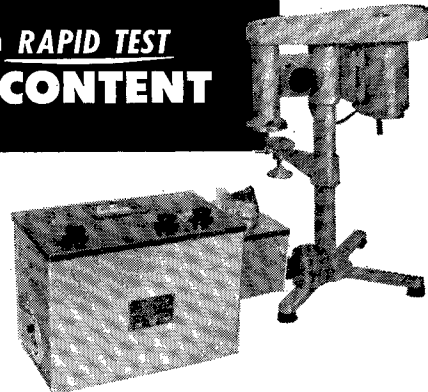
Registrations since last month are:

- J. R. Baxley, Sessions Oil Mills, Enterprise, Ala.
- O. L. Bennett, U.S.D.A. Agricultural Research Service, Chicago, Ill.
- A. J. Bonanno, Spencer Kellogg and Sons Inc., Edgewater, N. J.
- Robert Casparian, E. F. Drew and Company Inc., Boonton, N. J.
- G. C. Cavanagh and Albert Cera, Ranchers Cotton Oil Company, Fresno, Calif.

C. H. Coleman, Chicago Quartermaster Depot, Chicago, Ill.
 R. O. Crisler, Procter and Gamble Company, Cincinnati, O.
 I. B. Eisdorfer, Smith, Kline, and French Laboratories, Philadelphia, Pa.
 David Firestone, U. S. Food and Drug Administration, Arlington, Va.

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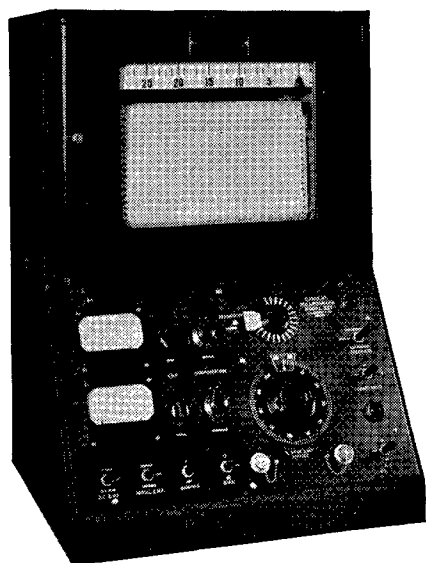
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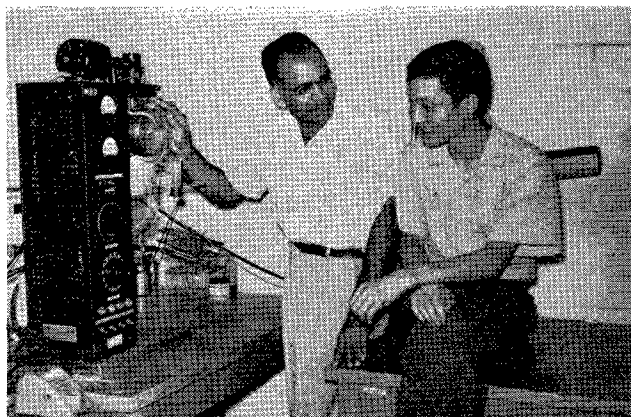
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MOLECULAR STILL—V. Bhalerao (left) describes a piece of equipment to T. Nishida during the 1955 short course at the University of Illinois.

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Otto Gabbard, Standard Brands Inc., Indianapolis, Ind.
Eugene Giehl, Faber Industries Inc., Peoria, Ill.
J. W. Goth, Harchem Division, Wallace and Tiernan Inc.,
Dover, O.
E. R. Hasechka, Pillsbury Mills Inc., Springfield, Ill.
E. A. Hodges, Kocouri Company, Chicago, Ill.
J. E. Huss, Lauhoff Grain Company, Danville, Ill.
Harold Ingham, Pope Testing Laboratories, Dallas, Tex.
R. H. Jones, Darling and Company, Chicago, Ill.
Richard Kassabian, United Africa Company, West New York,
N. J.
J. D. Lenley, du Pont de Nemours Company, Kinston, N. C.
M. A. Marino, Corn Products Refining Company, Argo, Ill.
Francis Meyvis, Distillation Products Industries, Rochester,
N. Y.
Shigeru Miki, Miyoshi Oil and Fat Company, Tokyo, Japan
Maelyn Peat, W. J. Stange Company, Chicago, Ill.
W. H. Rapp, Wilson-Martin Division, Philadelphia, Pa.
J. P. Ruszel, C. P. Hall Company of Illinois, Chicago, Ill.
T. R. Rogers, Columbia-Southern Chemical Corporation, Corpus
Christi, Tex.
E. L. Schaut, S. C. Johnson and Son Inc., Racine, Wis.
C. R. Scholfield, Northern Utilization Research Branch, Peoria,
Ill.
R. N. Schweizer, Smith, Kline, and French Laboratories, Phil-
adelphia, Pa.
Rodney Stewart, Wilson and Company, Chicago, Ill.
V. V. Studer, General Foods Corporation, Hoboken, N. J.
W. B. Tarver, Union Bag and Paper Corporation, Savannah,
Ga.
Fred Tausig, W. J. Stange Company, Chicago, Ill.
H. J. Washburn, Tee Pak Inc., Chicago, Ill.
G. G. Wilson, General Mills Inc., Kankakee, Ill.
J. F. Wintermantel, General Mills Inc., Minneapolis, Minn.

F. A. KUMMEROW

PRECISION SCIENTIFIC COMPANY, Chicago, Ill., has published bulletin No. 615 on a redesigned dual titrometer, used for performing potentiometric titrations on opaque and highly colored colored solutions.



ALLERTON PARK—This scene shows some of the short course students enjoying the woods near the University of Illinois campus in Urbana.

Crane Prepares Book for Centennial

DEDICATED to American men and women in industry by J. L. Holloway, president of Crane Company, is a handsome picture book entitled "Everything and the Kitchen Sink" (Farrar, Straus, and Cudahy, New York, \$4, 1955). Scores of black and white reproductions of etchings, paintings, and photographs, accompanied by appropriate text, tell the dramatic history of 100 years of American industry.

The 160-page book is printed on opaque, non-glossy paper, and the 7½ x 10½-inch pages are large enough to insure good reproduction of the artwork. Attractively bound in a dark gray board cover, with orange cloth on the backbone, it will be of special interest to collectors of Americana.

Wool Grease Report Available

A report entitled, "Wool Grease, the Economics of Recovery and Utilization in the United States," has been prepared. With bibliography it runs to 164 pages. Copies may be obtained by writing Marketing Information Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington, D. C.

Publishes Book on Greases

The National Lubricating Grease Institute announces publication of a new 982-page book entitled "Manufacture and Application of Lubricating Greases," by C. J. Boner. It covers the raw materials used and the equipment and processing necessary to convert them into superior greases.

Some of the information included has not appeared before in book form, according to H. L. Hemmingway, president of the Institute. Among these topics are complex-type soap lubricants, non-soap-thickened products, and lithium-base lubricating greases.

Published by Reinhold Publishing Company, the book is available at book stores or from the Institute office, 4638 J. C. Nichols parkway, Kansas City 12, Mo.

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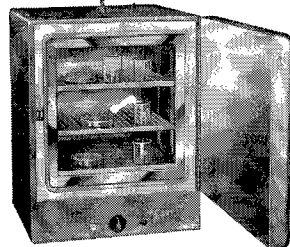
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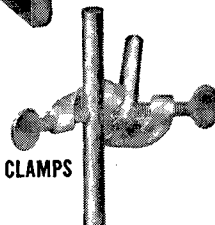
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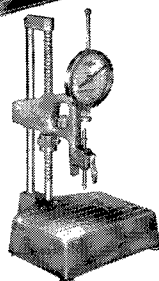
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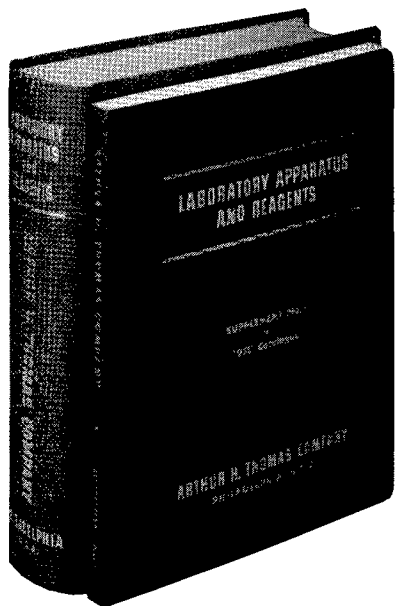
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The Soybean Research Council

(Continued from page 4)

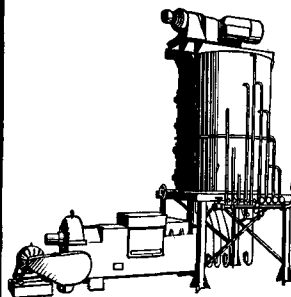
introduction of urea in feeds some years ago necessitated a careful study of the practice with respect to urease activity in soybean oil meal.

The Research Relations Group maintains close contact with the experiment stations and colleges which are carrying on soybean research; roughly 50 organizations are in touch each year with members of the Council maintaining personal relations with those most active in soybean research.

A HIGHLY IMPORTANT activity under the aegis of the Soybean Oil Committee has been the sponsoring of an annual flavor stability symposium; in the informal give-and-take atmosphere engendered by the symposium many worthwhile ideas have been developed and encouraged. Certainly some of the progress of soybean oil to its present status as a major edible oil can be traced to material sponsored and first presented at these meetings. Since improved processing techniques and other technical advances have lessened the stability problem, the scope of the symposia has been broadened to include subjects other than flavor stability. In the development of test methods and other activities requiring appropriate group action, the Council collaborates closely with the American Oil Chemists' Society. Such assistance by the Society, which is in the broad interest of the fats and oils industry in the United States, is deeply appreciated. The Soybean Research Council hopes the collaboration can always be made a two-way street.

ROBERT L. TERRILL, chairman

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