

# ASSOCIATIONS FORUM

## Chemistry from Seed to Plate at 124th ACS Meeting

THE CHEMISTRY involved in agriculture and food will be covered, literally from seed to plate, in the programs arranged by three divisions of the AMERICAN CHEMICAL SOCIETY for the Society's fall meeting in Chicago next month.

The Division of Agricultural and Food Chemistry will present a five-day program with some concurrent sessions, including some 90 papers and six symposia. The Division of Carbohydrate Chemistry has planned a program of over 30 papers with two symposia and the Division of Fertilizer and Soil Chemistry will present over 25 papers and two symposia.

The meeting begins with registration on Sunday afternoon, Sept. 6 and runs through Friday afternoon, Sept. 11. Headquarters will be at the Conrad Hilton Hotel, but sessions will be held in other hotels.

In addition to the technical sessions, a variety of social events, plant tours, and other special plans are programmed. Plant tours of interest to people in the fields of agriculture and food chemistry include a full day with Armour & Co.—half of it in the fats and derivatives plant at McCook, Ill., and the other half at the Armour Laboratories in Bradley, Ill., Corn Products Refining Co.'s plant at Argo, Ill., will provide another half-day plant tour. A tour through Swift & Co.'s plant at the stock yards will take visitors through beef dispatching, cutting, processing and the Martha Logan test kitchens. Other tours will be to Abbott Laboratories, Illinois Institute of Technology, Northwestern University, E. H. Sargent & Co., G. D. Seale & Co., and some steel plants, and oil refineries.

Registration fee is \$5.00 for ACS members, nonmember nonchemists, and chemistry and chemical engineering stu-

dents. Chemists and chemical engineers residing in the U. S. who are not members of the ACS pay a \$10 registration fee.

### Luncheons and Dinners

The Division of Agricultural and Food Chemistry will meet for luncheon on Wednesday, Sept. 9, at the Hotel Congress, where the division will hold its technical sessions. Main speaker at the luncheon will be H. E. Robinson of Swift & Co., who will discuss better nutrition and the food industry.

On Wednesday evening, the Division of Carbohydrate Chemistry will hold its dinner meeting in honor of George P. Meade, who has made many contributions to sugar chemistry. The dinner and the divisional technical sessions will be held in the Palmer House.

## DIVISION OF AGRICULTURAL AND FOOD CHEMISTRY

Arthur N. Prater, *Chairman*

D. M. Doty, *Secretary*

### Symposium on Problems of Deterioration in Food Fats

W. O. Lundberg, *Presiding*

#### MONDAY MORNING (SEPT. 7)

W. O. LUNDBERG. Introductory Remarks.

STEWART G. MORRIS. Recent Studies on the Mechanism of Fat Oxidation in Its Relation to Rancidity.

J. C. COWAN, C. D. EVANS, AND HERBERT J. DUTTON. Progress in Research on the Flavor Stability of Soybean Oil.

EMERSON W. BIRD AND CECIL G. FORTNEY. Oxidative Deterioration in Dairy Products.

MARIAN W. KIES. Enzymatic Factors in Deterioration of Edible Fats.

H. R. KRAYBILL AND L. R. DUGAN. New Developments in Antioxidants.

The luncheon of the Division of Fertilizer and Soil Chemistry will be held on Thursday, Sept. 10 in the Hotel Congress, where technical meetings will also be held. George D. Scarseth of the American Farm Research Association will be the speaker. He will talk about experiences with limiting factors in agricultural research.

In addition to the programs of the divisions printed below, there will also be other symposia and papers of interest to the field of agricultural and food chemistry. The Division of Biological Chemistry has symposia scheduled on frontiers in enzymology, metabolism of one-carbon compounds, and electromigration in stabilized electrolytes. There will also be a number of papers on enzymes, amino acids, proteins, metabolism, microbiology, sterols, and lipides.



Arthur N. Prater

### Symposium on Developments in the Chemistry of Fats and Oils

W. O. Lundberg, *Presiding*

#### MONDAY AFTERNOON

W. O. LUNDBERG. Introductory Remarks.

D. H. WHEELER. Recent Applications of Infrared Spectroscopy to Fatty Acids and Derivatives.

L. I. HANSEN AND MARVIN W. FORMO. Interesterification Processes.

HERBERT J. DUTTON. Countercurrent Fractionation of Lipids.

DANIEL SWERN. New Uses for Fats.

RALPH T. HOLMAN. Essential Fatty Acid Metabolism.

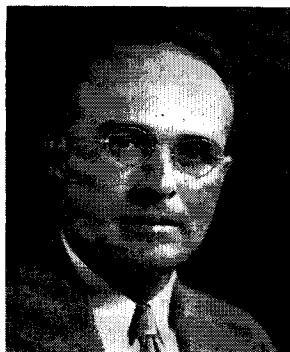
### Symposium on Technology of Food Packaging Materials

L. J. Hayhurst, *Presiding*

#### TUESDAY MORNING (SEPT. 8)

L. J. HAYHURST. Introductory Remarks.

H. E. Robinson



George P. Meade



George D. Scarseth



## Associations Forum

NELSON ALLEN. Cellophane in Food Packaging.

M. C. REED. Vinyl Resins for Food Packaging.

PAUL JAMES VAUGHAN. Food Packaging in Pliofilm.

MARSHALL RUTZ. Vegetable Parchment Paper.

ROGER V. WILSON. Packaging of Foods in Metal and Composite Cans.

C. E. LINDGREN. "The Magic Box." (Motion Picture)

PAUL B. REUMAN. Package—From Polymer to Purchase.

LUCIUS W. ELDER. A Food Packer's View of Packaging Materials.

SAM SCHULLER. Adhesives in Food Packaging.

### TUESDAY AFTERNOON

L. J. HAYHURST. Introductory Remarks.

CLIFFORD J. B. THOR AND MEYER GOLDMAN. Polyethylene Film for Food Packaging.

F. C. DULMAGE. Saran Film—Its History and Development for Food Packaging.

ROBERT D. LOWRY AND EDWARD A. NEBESKY. Cryovac Packaging of Foods.

A. I. TOTTEN, JR. Aluminum Foil For Food Packaging.

W. M. DIXON. "Packaging Foods in Glass in 1953." (Motion Picture)

J. F. McDOWELL. Development of the Shipping Container Industry.

GORDAN P. DILLON. The Converter's Side of the Packaging Story.

JOHN M. RAMSBOTTOM. Current Trends in Meat Packaging.

BRUCE E. ELLICKSON, VERN HASENZAHN, AND RALPH V. HUSSONG. A Method for Measuring Gas Permeability of Packaging Films.

**Business Meeting.** Division of Agricultural and Food Chemistry.

### General Papers

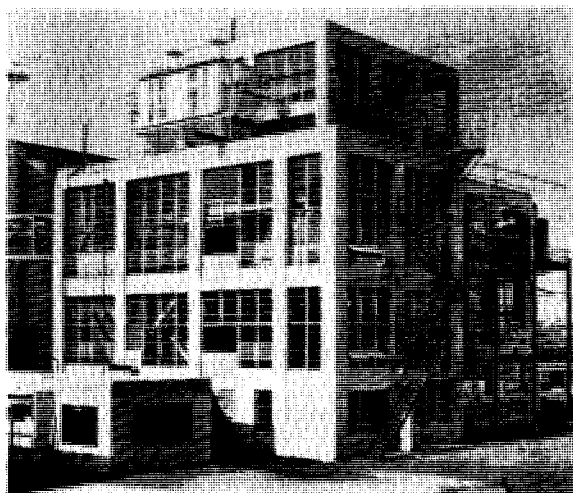
Arthur N. Prater, *Presiding*

### WEDNESDAY MORNING (SEPT. 9)

H. L. MITCHELL AND RALPH E. SILKER. Determination of Carotene in Alfalfa Meal Treated with *N,N'*-diphenyl-*p*-phenylenediamine.

L. L. MCKINNEY, E. H. UHING, J. L.

Corn Products Co.'s solvent extraction plant at Argo, Ill., one of the plants on the tour schedule for the ACS meeting



WHITE, J. C. COWAN, AND J. C. PICKEN. Toxicity of Trichloroethylene-Extracted Soybean Oil Meal. Autoxidation Products of Trichloroethylene.

DONALD SCOTT. Identification of Enzyme Desugarized Egg Solids.

MAX MILNER AND JOHN B. THOMPSON. Physical and Chemical Consequences of Advanced Spontaneous Heating in Stored Soybeans.

E. L. PIPPEN. Effect of Selected Pretreatments on the Flavor of Chicken.

N. V. LOVEGREN AND R. O. FEUGE. Permeability to Water Vapor of Mixtures of Acetostearin and of 1,2-Diaceto-3-Stearin and 1-Aaceto-3-Stearin.

GEORGE G. KELLEY AND KARL DITTMER. The Effect of Menadione on the Rate of Souring of Milk.

D. G. CHAPMAN AND J. A. CAMPBELL. The Effect of Bone Meal in Enriched Bread on the Level of Hemoglobin in Rats.

**Divisional Luncheon.** H. E. ROBINSON. Subject: Better Nutrition and the Food Industry.

## Pesticides Subdivision

F. A. Gunther, *Chairman*

J. L. St. John, *Secretary*

### Symposium on Rodenticides

Justus C. Ward, *Presiding*

### TUESDAY MORNING (SEPT. 8)

JUSTUS C. WARD. Introductory Remarks.

JACK F. WELCH. Chemical Repellents in Rodent Control.

RALPH E. HEAL. Rodenticides and Their Economic Importance in Controlling Economic Damage.

CARL H. KRIEGER, FRANCIS B. COON, AND EARL F. RICHTER. Chemical Problems Encountered in Developing an Anticoagulant Rodenticide.

### TUESDAY AFTERNOON

ALFREDO N. BICA. Rodenticides and Bubonic Plague Control.

CARL O. MOHR. Rodenticides in the Public Health Program of the United States.

**Business Meeting.** Pesticides Subdivision.

### General Papers

J. L. St. John, *Presiding*

### WEDNESDAY MORNING (SEPT. 9)

F. L. HOWARD AND D. J. FRESE. Developments in Cadmium Fungicides.

H. M. BAKER, W. K. LOWEN, AND M. LEVITSKY. The Determination of Microquantities of 3-(*p*-chlorophenyl)-1,1-dimethylurea in Soils.

W. E. BLEIDNER, H. M. BAKER, AND W. K. LOWEN. The Determination of Microquantities of 3-(*p*-chlorophenyl)-1,1-dimethylurea in Plant Tissue.

W. E. BLEIDNER. Application of Paper Chromatography in the Determination of Microquantities of 3-(*p*-chlorophenyl)-1,1-dimethylurea.

H. H. INCHO, EILEEN J. INCHO, AND N. W. MATTHEWS. Laboratory Evaluation of Pyrethrins-Piperonyl Butoxide Formulations for Insect-Proofing of Paper.

D. H. MOORE, D. K. GEORGE, V. O. MARTIN, AND J. A. GARMAN. Greenhouse Evaluation of Three Carbamate Herbicides in Comparison with CIPC.

J. D. EASTMAN, G. E. LYNN, AND K. C.

BARRONS. A Study on the Vapor Movement of Dinitro-*o*-*sec*-Butylphenol When Used as a Preemergence Herbicide.

A. M. MATTSON, JANET P. SPILLANE, AND GEORGE W. PEARCE. Modification of the Schechter-Hornstein Method for the Determination of Benzene Hexachloride.

WALTER D. HARRIS. The Relationship Between Chemical Structure of a Series of Organic Sulfites and Toxicity to Two-Spotted Mites.

## Fermentation Subdivision

L. A. Underkofler, *Chairman*

J. C. Sylvester, *Secretary*

### Symposium on Fermentation Process Control

Elmer L. Gaden, Jr., *Presiding*

### WEDNESDAY AFTERNOON (SEPT. 9)

ELMER L. GADEN, JR. Introductory Remarks.

THOMAS E. FREANEY, WILLIAM R. HART, PAUL R. GREENMAN, OHMER G. WEGRICH, AND ROBERT A. SHURTER, JR. Use of Five-Gallon Fermentors for the Evaluation of Raw Materials and New Cultures.

H. R. SALLANS, J. M. ROXBURGH, AND J. F. T. SPENCER. Factors Affecting the Production of Ustilagic Acid by *Ustilago zeae*.

ARTHUR E. HUMPHREY AND ELMER L. GADEN, JR. Air Sterilization by Fibrous Media.

W. H. DAY, W. C. SERJAK, J. R. STRATTON, AND L. STONE. Antibiotics as Contamination-Control Agents in Grain Alcohol Fermentations.

ROBERT E. WILSON AND ROBERT K. FINN. Population Dynamics of a Continuous Propagator for Microorganisms.

### Symposium on Nontherapeutic Uses for Antibiotics

Nestor Bohonos, *Presiding*

### THURSDAY MORNING (SEPT. 10)

NESTOR BOHONOS. Introductory Remarks.

J. J. OLESON. The Role of Antibiotics in Avian Nutrition.

W. W. CRAVENS. Antibiotics for Laying and Breeding Hens.

H. D. WALLACE, T. J. CUNHA, AND R. BRAUDE. The Value of Antibiotics in the Nutrition of Swine.

DAMON V. CATRON. Effect of Antibiotic Feeding on the Carcass Quality in Swine.

B. CONNOR JOHNSON, H. E. SCHENDEL, E. W. HARTSOOK, BETTY BATCHELOR, CAROL PROMISLOW, AND EVA M. COHN. The Mechanism of Action of Antibiotics in Stimulating Growth in Animals on Marginal or Deficient Diets.

J. THOMAS REID, RICHARD G. WARNER, AND JOHN K. LOOSLI. Nutrition of Ruminants.

LOUIS L. RUSOFF AND LORRAINE S. GALL. Mode of Action of Antibiotics in Ruminant Nutrition.

J. C. LEWIS, K. IJICHI, T. F. SUGIHARA, P. A. THOMPSON, N. S. SNELL, G. ALDERTON, AND J. A. GARIBALDI. Strains or Species of the Genus *Bacillus* as a Source of Feed Supplements.

D. V. FROST AND H. C. SPRUTH. The Dual Role of Organic Arsenicals and Antibiotics.

W. H. Peterson, *Presiding*

**THURSDAY AFTERNOON**

LOUIS G. NICKELL AND ALEXANDER C. FINLAY. Antibiotics and Their Effects on Plant Growth.

PAUL SIMINOFF AND DAVID GOTTLIEB. The Production, Stability, and Activity of Antibiotics in Soil.

CURT LEBEN AND G. W. KEITT. Antibiotics and Plant Disease.

WILLIAM J. ZAUMEYER, H. REX THOMAS, AND JOHN W. MITCHELL. Control of Halo Blight of Beans with Streptomycin.

H. H. WEISER, L. E. KUNKLE, AND F. E. DEATHRAGE. The Use of Antibiotics in Meat Processing.

H. L. A. TARR, J. BOYD, AND H. M. BISSETT. Experimental Preservation of Flesh Foods with Antibiotics.

J. C. LEWIS, H. D. MICHENER, AND C. R. STUMBO. Antibiotics in the Preservation of Processed Foods.

CLEVE B. DENNY, C. WALLACE BOHRER, AND EDWIN J. CAMERON. Effect of Antibiotics on Canned Food Spoilage Organisms.

WILSON L. SMITH, JR. Antibiotic Treatments for the Reduction of Bacterial Soft Rot of Packaged Spinach.

FRED B. STRANDSKOV AND JOHN B. BOCKELMANN. Antibiotics as Inhibitors of Microbiological Contamination in Beer.

**Business Meeting**, Fermentation Sub-division.

**General Papers**

L. A. Underkofler, *Presiding*

**FRIDAY MORNING (SEPT. 11)**

A. P. SAUNDERS AND J. C. SYLVESTER.

The Biosynthesis of S<sup>35</sup>-Labeled Penicillin in Synthetic Media.

ERIK G. M. TORNQVIST, R. F. ANDERSON, AND W. H. PETERSON. Relation of Fat Metabolism to Penicillin Production.

L. M. WHITMORE, JR., AND W. H. PETERSON. Amino Acid Content of Penicillin Broths.

M. PISANO, B. H. OLSON, AND C. L. SANCLEMENTE. A Chemically Defined Medium for the Growth of the Antibiotic Producing Mold *Cephalosporium salmosynnematum* 3590A.

CHESTER E. HOLMLUND, SAUL A. SCHEPARTZ, JAMES J. VAVRA, AND MARVIN J. JOHNSON. Native Bacterial Polysaccharides as Potential Plasma Extenders.

H. M. TSUCHIYA, N. N. HELLMAN, H. J. KOEPEL, J. CORMAN, C. S. STRINGER, F. R. SENTI, AND R. W. JACKSON. Further Studies on Factors Controlling Molecular

**Associations Forum**

Weight of Enzymatically Synthesized Dextran.

J. M. Van Lanen, *Presiding*

**FRIDAY AFTERNOON**

PING SHU. Oxygen Uptake in Shake Flask Fermentations.

MARVIN P. STEINBERG AND Z. JOHN ORDAL. The Effect of Several Fermentation Variables on the Rate of Fat Formation by *Rh. gracilis*.

WARREN D. KITTS AND LELAND A. UNDERKOFER. Cellulose Digestion by Rumen Microorganisms. I. Identification of the Initial Hydrolytic Products.

WARREN D. KITTS AND LELAND A. UNDERKOFER. Cellulose Digestion by Rumen Microorganisms. II. The Cellulolytic Enzymes.

**DIVISION OF CARBOHYDRATE CHEMISTRY**

T. R. Gillett, *Chairman*

Norman F. Kennedy, *Secretary*

**Symposium on Dextran Chemistry**

C. E. Rist, *Presiding*

**MONDAY MORNING (SEPT. 7)**

C. E. RIST. Introductory Remarks.

R. L. MELLIES, C. L. MEHLTRETTER,

P. R. WATSON, I. A. WOLFF, AND C. E.

RIST. Production of NRRL-B-512 Dex-

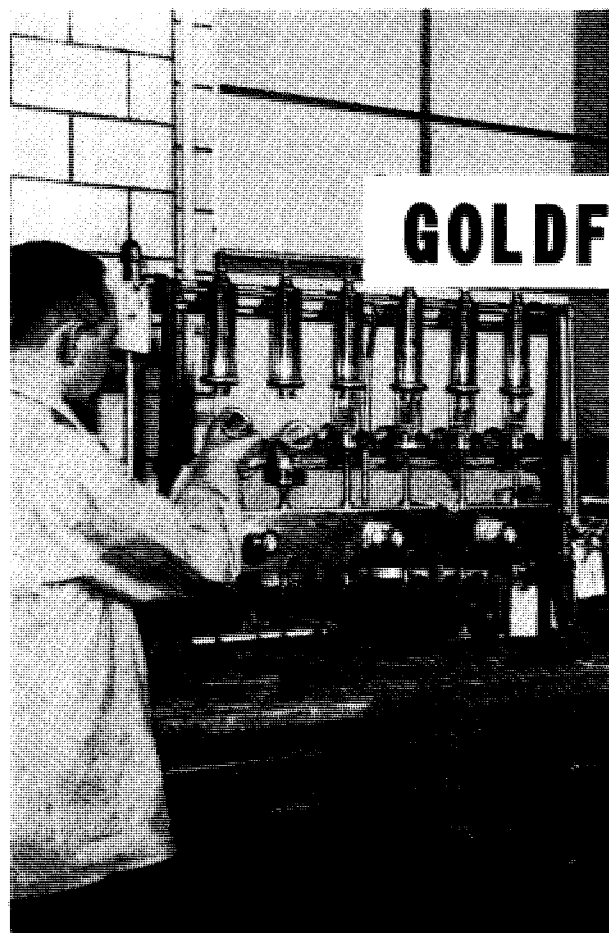
tran for Clinical Use. I. Hydrolysis

Techniques and Conditions.

B. T. HOFREITER, P. L. PATRICK, I. A.



T. R. Gillett



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fat determinations

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Goldfish apparatus is available in two, four and six condenser units—one size just right for your lab. The picture shows a six unit Goldfish extractor in the Wisconsin Alumni Research Foundation laboratory.

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## Associations Forum

WOLFF, AND C. E. RIST. Production of NRRL-B-512 Dextran for Clinical Use. II. Fractionation of Partial Hydrolyzates with Methanol and Ethanol.

MYER M. FISHMAN AND SEBASTIAN V. R. MASTRANGELO. Light Scattering of Low Molecular Fractions of Clinical Dextran.

C. S. WISE, R. J. DIMLER, H. A. DAVIS, AND C. E. RIST. Determination of Easily Hydrolyzable Fructose Units in Dextran Preparations.

JOHN W. SLOAN, B. H. ALEXANDER, R. L. LOHMAR, I. A. WOLFF, AND C. E. RIST. Determination of Dextran Structure by Periodate Oxidation Techniques.

C. A. WILHAM, ALLENE JEANES, MARJORIE J. AUSTIN, J. C. RANKIN, B. H. ALEXANDER, AND C. E. RIST. Molecular Heterogeneity in Dextran Preparations.

J. E. CLUSKEY, B. E. FISHER, R. J. DIMLER, AND C. E. RIST. Observations on the Behavior of Dextran in Alkaline Solutions.

## Symposium on Analytical Methods and Instrumentation Applied to Sugars and Other Carbohydrates

(Joint with Division of Analytical Chemistry)

G. P. Meade, Presiding

### TUESDAY MORNING (SEPT. 8)

T. R. GILLETT. Introductory Remarks. F. W. ZERBAN AND LOUIS SATTLER. The Concentration of Coloring Matter in Raw Cane Sugars.

T. R. GILLETT AND W. D. HEATH. Recent Developments in White Sugar Colorimetry.

JULIAN R. JOHNSON AND JOHN S. NEWMAN. The Standardization of Sieves and the Determination of the Average Grain Size and Degree of Variation of Grain Size of Granulated Sugar.

D. F. CHARLES AND P. F. MEADS. Some Factors in the Measurement of Refractive Dry Substance of Sucrose Solutions.

ROBERT F. SERRO AND ROBERT J. BROWN. Improved Chromatographic Method for Analysis of Sugar Beet Products. A Quantitative Method in Paper Chromatography for Measurement of Raffinose, Galactinol, and Inositol in Beet Juices and Processing Liquors.

ALLEN GEE, L. P. DOMINGUES, AND V. R. DEITZ. Determination of Inorganic Constituents in the Presence of Sucrose.

JAMES H. TURNER AND ROBERT H. COTTON. Notes on the Determination of Hydroxymethylfurfural and Some Related Compounds.

T. R. Gillett, Presiding

### TUESDAY AFTERNOON

HARRY S. OWENS, ALAN E. GOODMAN, AND ROBERTA F. ERLANDSEN. Factors Influencing the Sachs-LeDocte Method of Sucrose Analysis.

W. W. BINKLEY AND M. L. WOLFROM. Column Chromatography of Sugars.

GEORGE N. KOWKABANY. Paper Chromatography of Carbohydrates.

HERBERT F. LAUNER AND YOSHIO TOMIMATSU. Volumetric Determination of Glucose in the Microgram Range with Chlorous Acid. Stoichiometry of the Oxidation and Evaluation of Reagent Decomposition. Executive Committee Meeting.

T. R. Gillett, Presiding

### WEDNESDAY MORNING (SEPT. 9)

E. J. ROBERTS, C. A. FORT, AND L. F.

MARTIN. Identification and Determination of Nonnitrogenous Organic Acids of Sugar Cane by Partition Chromatography.

PAUL PORTER AND GARRARD WYLD. Techniques for the Elimination of Interferences in Flame Photometry.

STANLEY WAWZONEK. Polarography.

## CALENDAR

**Gordon Research Conference, AAAS.** Food and Nutrition. Colby Junior College, New London, N. H. Aug. 10-14.

**Plant Science Seminar.** Salt Lake City, Utah. Aug. 10-15.

**American Soybean Association.** Annual Meeting. Jefferson Hotel, St. Louis, Mo., Aug. 20-21.

**Gordon Research Conferences, AAAS.** Nucleic Acids and Proteins. New Hampton School, New Hampton, N. H. Aug. 24-28.

**Gordon Research Conferences, AAAS.** Vitamins and Metabolism. Colby Junior College, New London, N. H. Aug. 24-28.

**Food, Drug, and Cosmetic Law Division,** American Bar Association. Annual Meeting. Harvard Law School, Cambridge, Mass. Aug. 25-26.

**International Union of Biological Sciences.** Congress on Biochemistry. Bellagio, Italy. Sept. 1-5.

**Mycological Society of America.** Annual Foray and Meeting. University of Wisconsin, Madison, Wis. Sept. 4-9.

**American Institute of Biological Sciences.** University of Wisconsin, Madison, Wis. Sept. 6-9.

**American Chemical Society.** 124th National Meeting. Chicago. Sept. 6-11.

**6th International Congress of Microbiology.** Rome, Italy. Sept. 6-12.

**National Agricultural Chemicals Association.** Annual Meeting. Essex and Sussex Hotel, Spring Lake, N. J. Sept. 9-11.

**The Fiber Society.** Lowell Textile Institute, Lowell, Mass. Sept. 10-11.

**7th International Congress on Vines and Wines.** Rome, Italy. Sept. 12-20.

**American Tung Oil Association.** Annual Meeting. Buena Vista Hotel, Biloxi, Miss. Sept. 24-25.

JOHN C. SPECK, JR., AND ARLINGTON A. FORIST. The Determination of Hydroxymethyl Groups by Periodate Scission.

G. O. BURR AND H. P. KORTSCHAK. Phosphorus Compounds in Sugar Cane Leaves.

F. STITT, S. FRIEDLANDER, H. J. LEWIS, AND F. E. YOUNG. Photometric Determination of Aldoses in the Presence of Ketoses.

S. M. Cantor, Presiding

### WEDNESDAY AFTERNOON

W. C. SCHAFFER AND J. W. VAN CLEVE. Quantitative Paper Chromatography of

Partially Methylated Glucoses. An Improved Spectrophotometric Method Using Aniline Hydrogen Phthalate.

WILLIAM L. ROLLWITZ AND JOHN P. O'MEARA. Determination of Moisture by Nuclear Magnetic Resonance. I. Theory and Design Considerations for a Practical Instrument.

JOHN P. O'MEARA AND WILLIAM L. ROLLWITZ. Determination of Moisture by Nuclear Magnetic Resonance. II. Experimental Results on Products of the Corn Wet-Milling Industry.

STANTON B. SMITH, WILLIAM H. MATZ, AND J. WILLIAM ZABOR. Carbonaceous Adsorbents in Cane Sugar Decolorization. I. Color Selectivity in Contact Adsorption Tests.

LEONORE HOLLANDER KOEHLER. The Reaction of Desoxy Sugars with Anthrone. **Business Meeting.** **Divisional Dinner** in honor of GEORGE P. MEADE.

## General Papers

N. K. Richtmyer, Presiding

### MONDAY AFTERNOON (SEPT. 7)

R. W. JEANLOZ AND P. J. STOFFYN. Methylated Derivatives of Galactosamine.

G. N. BOLLENBACK, D. G. BENJAMIN, AND R. H. TENNYSON. Synthesis of Phenyl  $\beta$ -D-Glucopyranosiduronic Acids and Modifications in the Preparation of Esters of Glucuronolactone and Methyl (Tri-*o*-Acetyl- $\alpha$ -D-Glucopyranosyl Bromide) Uronate.

C. L. MEHRETTER, B. H. ALEXANDER, AND C. E. RIST. Sequestration by Sugar Acids.

J. V. KARABINOS AND A. T. BALLUN. Direct Reaction of Aldoses and Ketoses by Raney Nickel.

A. S. PERLIN. Oxidation of Carbohydrates with Periodate and Lead Tetraacetate in the Warburg Respirometer.

## General Papers

N. K. Richtmyer, Presiding

### THURSDAY MORNING (SEPT. 10)

T. LAURENT AND E. A. BALAZS. Effect of Ultraviolet Irradiation on Glucose.

JOHN C. SOWDEN. A Simple Preparation of Desoxyribose from Glucose.

E. W. PUTMAN AND Z. W. HASSID. Structure of a Galactoside from *Irideae laminarioides*.

ELVIN A. KABAT, DONALD L. MACDONALD, CLINTON E. BALLOU, AND HERMANN O. L. FISCHER. On the Structure of Galactinol.

R. W. JONES, R. J. DIMLER, AND C. E. RIST. Kinetics of Hydrolysis of Isomaltotriose and Isomaltotritol.

R. L. LOHMAR, F. B. WEAKLEY, AND G. E. LAUTERBACH. Controlled Degradation of Waxy Corn Starch by  $\alpha$ -Amylase.

### THURSDAY AFTERNOON

SISTER VIRGINIA HEINES. A Study of the Sugars in the *Phytolacca americana* Berry.

Laura C. Stewart and Nelson K. Richtmyer. The Transformation of D-Gulose to 1,6-Anhydro- $\beta$ -D-Gulopyranose in Acid Solution.

R. U. LEMIEUX AND G. HUBER. A Chemical Synthesis of Sucrose.

I. A. WOLFF, P. R. WATSON, AND C. E. RIST. Polysaccharide Carbamates.



View of the Chicago stockyards, location of the Swift plant to be visited by an ACS tour during the meeting

## DIVISION OF FERTILIZER AND SOIL CHEMISTRY

A. L. Mehring, *Chairman*

G. H. Serviss, *Secretary*

### Symposium on Fertilizer Technology

A. L. Mehring, *Presiding*

#### WEDNESDAY AFTERNOON (SEPT. 9)

A. L. MEHRING. Introductory Remarks.  
R. D. KRALOVEC AND W. A. MORGAN. Urea-Formaldehyde Condensation Products for Fertilizer Applications.

J. M. STINSON AND C. E. MUMMA. Regeneration of Sulfuric Acid from By-Product Calcium Sulfate. Exploratory Studies of Desulfurization.

ROBERT W. WAY AND E. L. NELSON. The Effect of Sodium Salts on Phosphate Reversion in Mixed Fertilizers.

PETER G. ARVAN AND ROBERT P. LANGGUTH. The Effect of Surface-Active Agents on the Preparation of Superphosphate and Mixed Goods Fertilizers.

E. J. FOX, H. E. BATSON, JR., AND A. V. BREEN. The Use of Surface Active Agents in Phosphate Rock Acidulation.

Round-Table Discussion of the Use of Surface-Active Agents in the Manufacture of Fertilizers.

George H. Serviss, *Presiding*

#### THURSDAY MORNING (SEPT. 10)

RIKIO KUMAGAI, HERBERT F. RAPP, AND JOHN O. HARDESTY. Physical Factors Influencing the Ammoniation of Superphosphates.

G. L. BRIDGER AND WALTER DROBOT. Pilot Plant Studies on Quick-Curing of Normal Superphosphate.

G. L. BRIDGER AND JOHN L. KEARNS. Quick-Curing of Triple Superphosphate Made from Wet-Process Phosphoric Acid.

D. C. SPENCE. Metallic Silicofluorides from the Fertilizer Industry.

D. R. BOYLAN, G. L. BRIDGER, AND W. C. DAVY. Production of Calcium-Magnesium Phosphate Fertilizer in a Fuel-Fired Furnace.

F. B. FOLCKEMER AND E. S. LOEFFLER. Characteristics of Insecticide-Fertilizer Mixtures.



A. L. Mehring

**Divisional Luncheon.** GEORGE D. SCARSETH. Experiences with Limiting Factors in Agricultural Research.

A. L. Mehring, *Presiding*

#### THURSDAY AFTERNOON

WALTER SCHOLL. The Mixed-Fertilizer Industry of the United States in 1953.

F. T. NIELSSON, L. D. YATES, L. F. ROY, AND F. G. HEIL. Nitric Phosphates from Phosphate Rock, Nitric Acid, Ammonia, Potassium Chloride, and Carbon Dioxide.

Z. A. STANFIELD. Economics of the Nitric Phosphate Fertilizer Processes.

J. W. TURRENTINE. Chemistry as Applied in Potash Refining—An Outline.

J. A. BARR, JR., JOHN W. RUCH, AND RALPH F. BORLIK. Recovery of Uranium from Phosphate Rock.

**Business Meeting.**

### Symposium on Soil Chemistry

George H. Serviss, *Presiding*

#### FRIDAY MORNING (SEPT. 11)

W. H. MACINTIRE, W. M. SHAW, AND CLAIRE VEAL. Differential Fixation of

R. W. STAROSTKA, W. H. ARMIGER, AND W. L. HILL. Fertilizer Value of Calcined and Fused Phosphates on Typical Soils of the United States as Shown by Greenhouse Tests.

MAURICE FRIED. The Quantitative Evaluation of Both Synthetically Produced

## Associations Forum

and Naturally Occurring Phosphatic Fertilizers Using  $P^{32}$ .

J. C. ENGIBOUS AND JOHN M. DEMING. Status of Soil Conditioner Application Research.

R. M. HEDRICK. The Laboratory Evaluation of Polyelectrolytes as Soil Conditioners.

### General Papers

A. L. Mehring, *Presiding*

#### FRIDAY AFTERNOON

J. B. HESTER AND R. L. ISAACS, JR. The Use of Leaching Frames and Plant Analyses in Supplementary Fertilizer Recommendations.

FIRMAN E. BEAR. Progress in Trace Element Research.

KATHARINE S. LOVE AND C. W. WHITTAKER. Surface Areas of Agricultural Limestones.

J. B. HESTER AND R. L. ISAACS, JR. Plant Nutrients in Carrot Production.

A. B. PETTIT AND T. J. CLARKE, JR. Safety Makes Dollars and Sense.

### Oil Chemists to Meet In November at Chicago

The American Oil Chemists Society has announced that its 27th annual fall meeting will be held in Chicago Nov. 2 to 4. Headquarters will be the Hotel Sherman. A. F. Kapecki of Wurster & Sanger Inc., will be the general chairman of the meeting.

Topics now being considered for the program include: margarine, industrial and engineering processes, use of fats in animal feeding, drying oils, and soaps.

### Fertilizer Section of Safety Council to Meet in Chicago

The fertilizer section of the National Safety Council will hold its annual meeting in Chicago on Oct. 21 and 22 during the National Safety Congress.

The Hamilton Hotel will be meeting headquarters for the fertilizer section.

Among the plans for the meeting is a demonstration of Cardox blasting at the International Minerals & Chemical Corp. plant in Chicago.

Also scheduled is a floor discussion of case histories of typical accidents in fertilizer plants. Causes, investigation, and preventative measures will be discussed.

Other features of the program will be a discussion of the cost and profit of a successful safety program and a question-and-answer panel.

### Symposium on Coordination Chemistry in Denmark

The Danish Chemical Society is planning a symposium on coordination chemistry, to be held in Copenhagen from Aug. 9 to 13. Structural and physicochemical problems of complex compounds and metalorganic compounds will be discussed.