

# Cincinnati Meeting, October, 1965

## Continuing Tradition in Steady Growth



THE Technical Program of the 39th Fall Meeting of the AOCS begins Monday morning, October 11 at the Netherland Plaza Hotel, Cincinnati, Ohio. It will feature discussion periods in connection with several of its sessions, according to the suggestion of many members. A major symposium organized by F. A. Kummerow on "*Metabolic Roles of Lipids*," dealing with membranes and reactions at interfaces, will have an international flavor. Special sessions of invited papers will deal with "*Non-ionic Detergents—Physical and Chemical Behavior*," Chairman Arno Cahn; "*Statistical Methodology in the Fat and Oil Industry*," Chairman G. R. Wagner; "*Safflower*" (covering oil and meal and economics), Chairman J. A. Kneeland; and an all-day session on "*Mass Spectrometry Applied to Lipids*," organized by R. T. Holman. There will be the usual active session in the "*Engineering-Processing-Safety*" area under F. M. Bloomberg. General sessions with a variety of timely presentations will cover Surfactant Chemistry, Oils and Shortenings, Reactions, Analytical Chemistry, Biochemistry and Fatty Acid Chemistry.

The Technical Program schedule is presented below, followed by abstracts of the papers numbered in sequence corresponding to the program schedule.

### MONDAY MORNING, OCTOBER 11, 1965

#### SESSION A—HALL OF MIRRORS

##### SURFACTANT CHEMISTRY

Chairman: A. K. Presnell, Andrew Jergens Company

1. **Isomeric Linear Alkylbenzenes and Sodiumalkylbenzenesulfonates** ..... 10:00  
*F. D. Smith,\* A. J. Stirton and M. V. Numez-Ponzoa, USDA, Eastern Regional Research Laboratory*
2. **Synthesis and Surface Active Properties of Sulfonated Branched Chain Fatty Acid Esters** ..... 10:20  
*T. J. Micich, E. A. Diamond and R. G. Bistline, Jr., USDA, Eastern Regional Research Laboratory*
3. **Polyethoxylated Alkyl Phenols: Relationship of Structure to Biodegradation** ..... 10:40  
*Q. W. Osburn and J. H. Benedict, The Procter and Gamble Company*
4. **A Procedure and Standards for the Determination of the Biodegradability of Alkyl Benzene Sulfonates and Linear Alkylate Sulfonate** ..... 11:00  
*F. E. Brenner, Subcommittee on Biodegradation Test Methods, The Soap and Detergent Association*
5. **Detection and Estimation of LAS in Waters and Effluents** ..... 11:20  
*R. D. Swisher, Monsanto Company*
- 5a. **Biodegradation of LAS Detergent Base Materials in an Operating Trickling Filter Sewage Treatment Plant** ..... 11:40  
*C. E. Renn and Gordon Kumke, Johns Hopkins University and Union Carbide Corporation*

\* Speakers shown in italics.

### MONDAY MORNING, OCTOBER 11, 1965

#### SESSION B—PAVILLION CAPRICE

##### SYMPOSIUM ON MASS SPECTROMETRY APPLIED TO LIPIDS

Chairman: R. T. Holman, Hormel Institute

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|--|-------|
| <b>Introductory Remarks</b> .....  | 10:00 |
| <i>R. T. O'Connor, USDA, Southern Regional Research Laboratory</i>   |       |
| <b>6. Heterogeneous Catalytic Deuteration of Methyl Oleate. I. Reduction and Separation of Isologs and Isomers</b> .....                     | 10:20 |
| <i>C. R. Schofield, W. K. Rohwedder, J. Barter and H. J. Dutton, USDA, Northern Regional Research Laboratory</i>                             |       |
| <b>7. Heterogeneous Catalytic Deuteration of Methyl Oleate. II. Bond Migration, Geometric Isomerization and Deuterium Distribution</b> ..... | 10:40 |
| <i>E. Selke, W. K. Rohwedder, V. L. Davison, T. Nieman and H. J. Dutton, USDA, Northern Regional Research Laboratory</i>                     |       |
| <b>8. Mass Spectrometry and Dimer Acid Structures</b> .....  | 11:00 |
| <i>D. H. Wheeler and L. E. Peterson, General Mills</i>   |       |
| <b>9. Mass Spectra Studies of High Molecular Weight Esters</b> .....   | 11:20 |
| <i>T. H. Kinstle and K. L. Rinehart, Iowa State University and University of Illinois</i>  |       |
| <b>10. The Uropygiols</b> .....  | 11:40 |
| <i>H. M. Fales and E. O. A. Haathi, National Institutes of Health</i>  |       |
| <b>Informal Discussion</b> .....   | 12:00 |
| <i>R. T. O'Connor</i>  |       |

### MONDAY MORNING, OCTOBER 11, 1965

#### SESSION C—PARLORS A-D

##### STATISTICAL METHODOLOGY IN THE FAT AND OIL INDUSTRY

Chairman: G. R. Wagner, Swift & Company

11. **The AOCS Statistics Committee—Its Function and Objectives** .....
 10:00 || *H. P. Andrews, Rutgers University* | |
- 12. **Statistics for Better Specs** .....
 10:30 || *Ralph Manring, Monsanto Chemical Company* | |
- 13. **Efficient Design for Interlaboratory Study of Variability in Analytical Procedures** .....
 11:00 || *R. D. Snee and H. P. Andrews, Rutgers University* | |
- 14. **Hydrogenation of Soybean Oil—The Effects of Process Variables on Selectivity and Isomer Formation, A Statistical Approach** .....
 11:30 || *L. H. Going, E. R. Purves and A. M. Lopez, The Procter & Gamble Company* | |
| **Discussion** ..... | 11:50 |

### MONDAY AFTERNOON, OCTOBER 11, 1965

#### SESSION A—HALL OF MIRRORS

**SESSION ON NONIONIC SURFACTANTS—  
PHYSICAL AND CHEMICAL BEHAVIOR**

Chairman: Arno Cahn, Lever Brothers Company

15. Correlation of Nonionic Surfactant Structure and Solubility with Textile Wetting ..... 2:00  
*J. A. Komor and J. P. G. Beiswanger, General Aniline and Film Corporation*
16. Properties of Ethoxylate Derivatives of Nonrandom Alkylphenols ..... 2:20  
*L. H. Smithson, Chevron Research Company*
17. The Solution Properties of Some Polyoxyethylene—Polyoxypropylene Surfactants in Non-Aqueous Solvents ..... 2:40  
*J. M. G. Cowie and A. F. Sirianni, National Research Council, Ottawa, Canada*
18. Micelle Formation in Mixtures of Nonionic and Anionic Detergents ..... 3:00  
*M. J. Schick and D. J. Manning, Lever Brothers Company*
19. Refractive Indexes of Alcohol Nonionics ..... 3:20  
*D. R. Weimer, L. D. Lindemuth and W. L. Groves, Continental Oil Company*
20. Viscosities of Aqueous Solutions of Block Copolymers of Propylene and Ethylene Oxides .... 3:40  
*J. R. Schmolka and L. R. Bacon, Wyandotte Chemicals Corporation*
21. The Oxypropylation of Fatty Alcohols and the Sulfation Products ..... 4:00  
*J. K. Weil, A. J. Stirton and Elizabeth A. Barr, USDA, Eastern Regional Research Laboratory*
- Discussion ..... 4:20

**MONDAY AFTERNOON, OCTOBER 11, 1965**

**SESSION B—PAVILLION CAPRICE**

**SYMPOSIUM ON MASS SPECTROMETRY  
APPLIED TO LIPIDS**

Chairman: H. J. Dutton, USDA, Northern Regional Research Laboratory

22. Characterization of Unsaturated Fatty Esters by Mass Spectrometry ..... 2:00  
*J. A. McCloskey, M. J. McClelland and R. E. Wolff, Baylor University, College of Medicine*
23. Gas Chromatographic and Mass Spectrometric Characterization of Cyclopropane Fatty Acid Esters ..... 2:20  
*W. W. Christie, W. E. Brugger and R. T. Holman, Hormel Institute*
24. Mass Spectrometric Investigation of Vitamin B<sub>6</sub> Compounds ..... 2:40  
*D. C. De Jongh and Walter Korytnyk, Wayne State University and Roswell Park Memorial Institute*
25. Pyrolysis-Gas Chromatography—Mass Spectrometry Applied to Some Simple Lipid Molecules .... 3:00  
*R. T. Holman, Manfred Deubig and H. W. Hayes, Hormel Institute*
26. Identification of Products from Oxidation of Methyl Linoleate by Mass Spectrometry ..... 3:20  
*R. J. Horvat, W. H. McFadden, H. Ny and N. G. Lane, USDA, Western Regional Research Laboratory*
27. Gas Chromatographic and Mass Spectral Identification of Some Volatiles from Gamma Irradiated Milk Fat ..... 3:40  
*L. L. Khatri, L. M. Libbey and E. A. Day, Oregon State University*
- Informal Discussion ..... 4:00  
*W. K. Rohwedder, USDA, Northern Regional Research Laboratory*
- Session Ends ..... 4:30

**MONDAY AFTERNOON, OCTOBER 11, 1965**

**SESSION C—PARLORS A-D**

**OILS AND SHORTENINGS**

Chairman: H. W. Lemon, Ontario Research Foundation, Toronto, Canada

28. The Stability of Soybean Oil: Effect of Time and Temperature on Deodorization ..... 2:00  
*Helen A. Moser, Patricia C. Cooney and C. D. Evans, USDA, Northern Regional Research Laboratory*

29. Stability Evaluation of Edible Linseed Oil ..... 2:20  
*C. D. Evans, Helen A. Moser, G. R. List and J. C. Cowan, USDA, Northern Regional Research Laboratory*
- 29a. A Chemical Study of the Volatile Decomposition Products of a Slightly Autoxidized Cottonseed Oil ..... 2:40  
*B. D. Mookherjee and S. S. Chang, Rutgers University*
30. Investigation of Antioxidants for Polyunsaturated Edible Oils ..... 3:00  
*J. W. Thompson and E. R. Sherwin, Tennessee Eastman Company and Eastman Chemical Products Incorporated*
31. Turnip Lipids. Storage Effect on Fatty Acid Composition ..... 3:20  
*M. LePage, Food Research Institute, Ontario, Canada*
32. Simplified Description of Some Patterns of Triglyceride Composition ..... 3:40  
*A. S. Richardson, Cincinnati, Ohio*
33. Fatty Acids of *Lindera Umbellata* and Other Lauraceae Seed Oils ..... 4:00  
*C. Y. Hopkins, Mary J. Chisholm and Linda Price, National Research Council, Ottawa, Canada*
34. Conjugated Tetraene from *Impatiens Edgeworthii* Seed Oil: A Progress Report ..... 4:20  
*M. O. Bagby, C. R. Smith, Jr., and I. A. Wolff, USDA, Northern Regional Research Laboratory*
35. The Occurrence of *cis-5,cis-9,cis-12-octadecatricoic Acid* in *Xeranthemum Annum* Seed Oil .... 4:40  
*R. G. Powell, C. R. Smith, Jr., and I. A. Wolff, USDA, Northern Regional Research Laboratory*

**TUESDAY MORNING, OCTOBER 12, 1965**

**SESSION A—HALL OF MIRRORS**

**SYMPOSIUM ON METABOLIC ROLES OF LIPIDS**

Sponsored by Analabs, Inc., Hamden, Conn.

Chairman: F. A. Kummerow, University of Illinois

36. Lipid-Protein Interactions and Cohesional Forces in the Lipoprotein Systems of Membranes .... 9:00  
*F. A. Vandenheuvel, Central Experimental Farm Animal Research Institute, Ottawa, Canada*
37. On the Orientation of Sulfolipids, Galactolipids and Phospholipids in Chloroplast Membranes .... 9:45  
*A. A. Benson, Scripps Institute of Oceanography, University of California, San Diego*
38. The Structure of Photoreceptors ..... 10:30  
*J. J. Wolken, Biophysical Research Laboratory, Carnegie Institute of Technology*
39. The Behavior of Sterols on Silica Surfaces and at Other Interfaces ..... 11:15  
*P. D. Klein, J. C. Knight and Patricia A. Szczepanik, Division of Biological and Medical Research, Argonne National Laboratory*

**TUESDAY MORNING, OCTOBER 12, 1965**

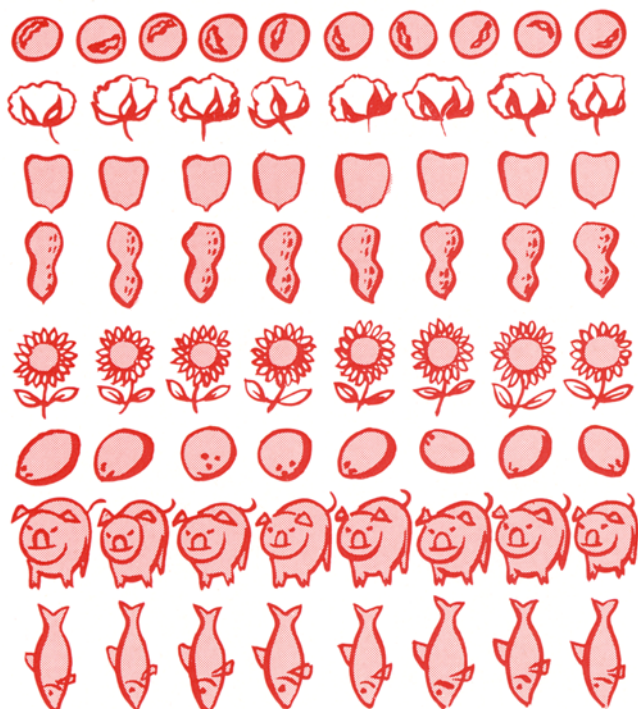
**SESSION B—PAVILLION CAPRICE**

**REACTIONS**

Chairman: S. J. Miller, Dubois Company

40. The Preparation and Properties of Some Petroselinylamine Derivatives ..... 9:00  
*Lida L. Placek and F. G. Dollear, USDA, Southern Regional Research Laboratory*
41. Acrylic Acid Derivatives of Partially Epoxidized Linseed Oil ..... 9:20  
*A. E. Rheineck and P. H. Lakshmanan, North Dakota State University*
42. Asymmetric Synthesis of Glycerol Derivatives .... 9:40  
*Dmytro Buchnea, University of Toronto, Canada*
43. Preparation and Evaluation of Vernolic Acid Esters as Plasticizers for Poly(Vinyl Chloride) .... 10:00  
*G. R. Riser, R. W. Riemenschneider and L. P. Witnauer, USDA, Eastern Regional Research Laboratory*
44. Catalytic Dehydrogenation of Methyl 12-Hydroxystearate to Methyl 12-Ketostearate ..... 10:20  
*Bernard Freedman and T. H. Applewhite, USDA, Western Regional Research Laboratory*

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| <b>45. Synthesis of Glycerol Monoethers of Anteiso Fatty Alcohols and Reinvestigation of the Benzylidene Glycerol Intermediate</b> ..... | <b>10:40</b> |
| <i>E. Serdarevich and K. K. Carroll, University of Western Ontario, Canada</i>   |              |
| <b>46. Fragmentation in Abnormal Ozonide Decompositions</b> .....  | <b>11:00</b> |
| <i>A. H. Wrigley, USDA, Eastern Regional Research Laboratory</i>   |              |
| <b>47. Secondary and Tertiary Amines from Aldehydes Derived from Ozonization of Soybean Esters</b> ....                                  | <b>11:20</b> |
| <i>E. H. Pryde, D. E. Anders and J. C. Cowan, USDA, Northern Regional Research Laboratory</i>  |              |
| <b>47a. Urethane Foams from Animal Fats. II. Reaction of Propylene Oxide with Fatty Acids</b> .....                                      | <b>11:40</b> |
| <i>Frank Scholnik, H. A. Monroe, Jr., E. J. Saggese and A. N. Wrigley, USDA, Eastern Regional Research Laboratory</i>                    |              |
| <b>47b. Urethane Foams from Animal Fats. III. Oxypropionated Dihydroxystearic Acids in Rigid Foams</b> .....                             | <b>12:00</b> |
| <i>E. J. Saggese, Frank Scholnik, Merta Zubillaga, W. C. Ault and A. N. Wrigley, USDA, Eastern Regional Research Laboratory</i>          |              |

### TUESDAY MORNING, OCTOBER 12, 1965

#### SESSION C—PARLORS A-D

##### OILS AND SHORTENINGS

Chairman: A. M. Moustafa, The Miami Margarine Company

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| <b>48. Standardization of Nuclear Magnetic Resonance Measurements of Solids in Fats and Shortenings</b> .....                | <b>9:00</b>  |
| <i>W. D. Pohle and R. L. Gregory, Swift and Company</i>  |              |
| <b>49. A Method for Adsorbent Fractionation of Cottonseed Oil for Intravenous Fat Emulsions</b> .....                        | <b>9:20</b>  |
| <i>W. S. Singleton, M. L. Brown and H. J. Zeringue, USDA, Southern Regional Research Laboratory</i>                          |              |
| <b>50. Flocculation of Phosphatide Stabilized Fat Emulsions by Electrolyte Solutions</b> .....                               | <b>9:40</b>  |
| <i>M. S. Gray and W. S. Singleton, USDA, Southern Regional Research Laboratory</i>   |              |
| <b>51. Conversion of Aldehyde Oils to Acetals with Cation Resin Catalysts</b> .....  | <b>10:00</b> |
| <i>R. E. Beal, D. E. Anders and L. T. Black, USDA, Northern Regional Research Laboratory</i>                                 |              |
| <b>52. New Coating Compositions Based on Dimorphotheca Oil</b> .....   | <b>10:20</b> |
| <i>A. E. Rheineck and G. M. Sastry, North Dakota State University</i>  |              |
| <b>53. Countercurrent Centrifugal Extraction of Raw Cottonseed Flakes with the Acetone-Hexane-Water Azeotrope</b> .....      | <b>10:40</b> |
| <i>V. L. Frampton, A. B. Pepperman and Joseph Simmons, USDA, Southern Regional Research Laboratory</i>                       |              |
| <b>54. The Application of a Capillary Extension Rheometer to the Determination of the Flow Characteristics of Lard</b> ..... | <b>11:00</b> |
| <i>H. J. Scherr and L. P. Witnauer, USDA, Eastern Regional Research Laboratory</i>   |              |

### TUESDAY AFTERNOON, OCTOBER 12, 1965

#### SESSION A—HALL OF MIRRORS

##### SYMPOSIUM ON METABOLIC ROLES OF LIPIDS

Sponsored by **Analabs, Inc., Hamden, Conn.**

Chairman: R. T. Holman, Hormel Institute

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|---|-------------|
| <b>55. Lipoprotein Distribution in Serum</b> .....  | <b>1:30</b> |
| <i>F. T. Lindgren, N. K. Freeman and A. M. Ewing, University of California</i>                        |             |
| <b>56. Enzymatic Hydrolysis at an Oil-Water Interface</b> .....                                       | <b>2:15</b> |
| <i>F. H. Mattson, The Proctor and Gamble Co.</i>  |             |
| <b>57. Control of Fatty Acid Composition in Glycerolipids</b> .....                                   | <b>3:00</b> |
| <i>W. E. M. Lands, University of Michigan</i>   |             |
| <b>58. Structural Investigations on Phospholipids from Cellular and Intracellular Membranes</b> ..... | <b>3:45</b> |
| <i>L. L. M. Van Deenen, University of Utrecht, The Netherlands</i>                                    |             |
| <b>General Discussion</b> .....   | <b>4:30</b> |



**TUESDAY AFTERNOON, OCTOBER 12, 1965**  
**SESSION B—PAVILLION CAPRICE**

**ANALYTICAL CHEMISTRY**

Chairman: R. C. Stillman, The Procter & Gamble Company

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| <b>59. The Detection of Epoxides in Heated Oils</b> .....  | <b>2:00</b> |
| <i>J. A. Fioriti, A. P. Bentz and R. J. Sims, General Foods Corporation</i>  |             |
| <b>60. Direct Cleavage of Internal Epoxides with Perodic Acids</b> .....   | <b>2:20</b> |
| <i>Gerhard Maerker and Elizabeth T. Haeberrer, USDA, Eastern Regional Research Laboratory</i>  |             |
| <b>61. The Question of Positional Preference in the Monoepoxidation of Methyl Linoleate</b> .....  | <b>2:40</b> |
| <i>G. Maerker, Elizabeth T. Haeberrer and W. C. Ault, USDA, Eastern Regional Research Laboratory</i>   |             |
| <b>62. Quantitative Estimation of the Total Glycerol Ether Concentration in Lipids</b> .....   | <b>3:00</b> |
| <i>D. G. Cornwell, T. D. Beardmore, K. E. Guyer and K. S. Holla, Ohio State University, and Medical College of Virginia, and Tata Oil Mills, Bombay, India</i> |             |
| <b>63. Gas-Liquid Chromatographic Analysis of Isomeric Glycerol Ethers</b> .....   | <b>3:20</b> |
| <i>Randall Wood and Fred Snyder, Oak Ridge Institute of Nuclear Studies</i>  |             |
| <b>64. Analysis of Ethylene, Diethylene and Propylene Glycol Monostearate by Quantitative Thin Layer Chromatography Using Densitometry</b> .....               | <b>3:40</b> |
| <i>G. L. Anderson and A. R. Tallman, Armour Industrial Chemistry Company</i>   |             |
| <b>65. Determination of Cyclopropenes by Hydrogenation and Fractionation</b> .....   | <b>4:00</b> |
| <i>Zigrida Zarins and R. O. Feuge, USDA, Southern Regional Research Laboratory</i>   |             |
| <b>66. A Precision Hydrogenation Apparatus</b> .....   | <b>4:20</b> |
| <i>W. K. Rohwedder, USDA, Northern Regional Research Laboratory</i>  |             |

**TUESDAY AFTERNOON, OCTOBER 12, 1965**  
**SESSION C—PARLORS A-D**

**SYMPOSIUM ON SAFFLOWER**

Chairman: J. A. Kneeland, Pacific Vegetable Oil Corporation

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| <b>67. The Status of Safflower</b> .....   | <b>2:00</b> |
| <i>J. A. Kneeland</i>  |             |
| <b>68. The Composition of Safflower Seed</b> .....   | <b>2:30</b> |
| <i>T. H. Applewhite, USDA, Western Regional Research Laboratory</i>  |             |
| <b>69. Safflower Oil Utilization in Surface Coatings</b> ....  | <b>3:00</b> |
| <i>A. E. Rheineck and Lowell Cummings, North Dakota State University and Pacific Vegetable Oil Corporation</i> |             |
| <b>70. The Role of Safflower Oil in Edible Oil Applications</b> .....  | <b>3:30</b> |
| <i>J. E. Blum, Durkee Famous Foods</i>   |             |
| <b>71. Safflower Meal</b> .....  | <b>4:00</b> |
| <i>G. O. Kohler, USDA, Western Regional Research Laboratory</i>  |             |
| <b>Discussion</b> .....  | <b>4:30</b> |

**WEDNESDAY MORNING, OCTOBER 13, 1965**  
**SESSION A—HALL OF MIRRORS**

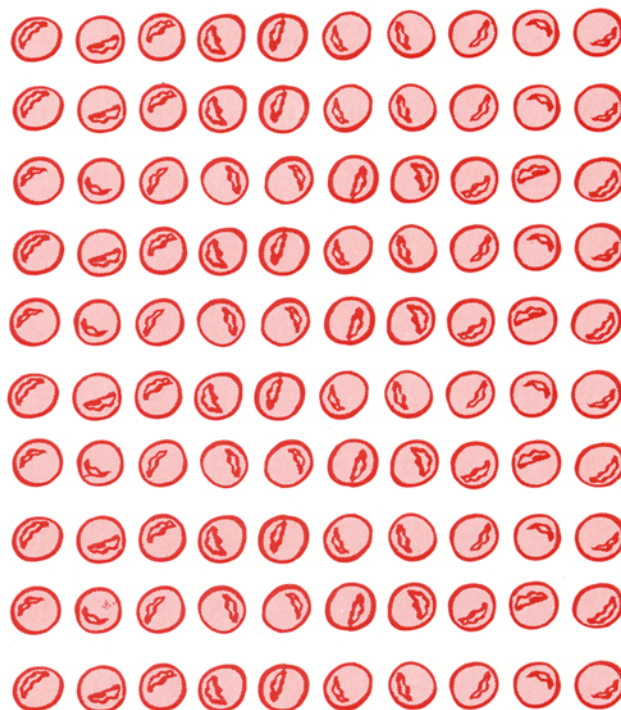
**BIOCHEMISTRY**

Chairman: N. R. Artman, The Procter & Gamble Company

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|---|-------------|
| <b>72. Lipid Changes in Maturing Oil-Bearing Plants. IV. Changes in Lipid Classes in Rape and Crambe Oils</b> ..... | <b>9:00</b> |
| <i>Mary E. McKillican, Food Research Institute, Ottawa, Canada</i>  |             |
| <b>73. Fatty Acids in Tissues of Rats Fed Human Food, Rat Ration and Synthetic Diets</b> .....                      | <b>9:20</b> |
| <i>Margaret O. Osborn, University of Iowa</i>   |             |
| <b>74. Biosynthesis of Docosapentaenoic and Other Fatty Acids by Rat Testes</b> .....                               | <b>9:40</b> |
| <i>J. T. Davis and J. G. Coniglio, Vanderbilt University</i>  |             |

(Continued on P. 408A)

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(Continued from P. 403A)

75. **Studies of the Metabolic Conversions and the Positional Distribution in Liver Lecithin of Some Unnatural Dienoic Acids** ..... 10:00  
*H. W. Sprecher, H. J. Dutton, F. D. Gunstone, P. J. Sykes and R. T. Holman, The Hormel Institute; USDA, Northern Regional Research Laboratory, and the University of St. Andrews*
76. **Degradation of Erucic Acid to Eicosenoic and Oleic Acids by the Intact Rat** ..... 10:20  
*B. M. Craig and Joyce L. Beare Rogers, Prairie Regional Laboratory, Saskatoon, Saskatchewan*
77. **Fatty Acid Composition of Lipids of Bull and Boar Semen** ..... 10:40  
*Balwant Ahluwalia, E. F. Graham and R. T. Holman, The Hormel Institute and University of Minnesota*
78. **Studies on the Metabolism of trans Acids in the Rat. Interconversion of trans-11,trans-14- and cis-11,cis-14-eicosadienoic Acids** ..... 11:00  
*O. S. Privett, E. M. Stearns, J. D. Nadenicek and F. J. Pusch, The Hormel Institute and University of Minnesota*
79. **Phospholipase A Properties of Several Snake Venom Preparations** ..... 11:20  
*L. J. Nutter and O. S. Privett, The Hormel Institute and University of Minnesota*
- WEDNESDAY MORNING, OCTOBER 13, 1965**  
**SESSION B—PAVILLION CAPRICE**
- ANALYTICAL**  
Chairman: Patricia M. Quinlin, The Procter & Gamble Company
80. **A Simple Micromethod for the Determination of the Structure of Unsaturated Fatty Acids via Ozonolysis** ..... 9:00  
*E. C. Nickell and O. S. Privett, The Hormel Institute and University of Minnesota*
81. **Heterogeneous Catalytic Deuteration of Methyl Oleate. I. Reduction and Separation of Isologs and Isomers** ..... 9:20  
*C. R. Scholfield, W. K. Rohwedder, J. Barter and H. J. Dutton, USDA, Northern Regional Research Laboratory*
82. **Heterogeneous Catalytic Deuteration of Methyl Oleate. II. Bond Migration, Geometric Isomerization and Deuterium Distribution** ..... 9:40  
*E. Selke, W. K. Rohwedder, V. L. Davison, T. Nieman and H. J. Dutton, USDA, Northern Regional Research Laboratory*
83. **Separation of Conjugated Methyl Octadecadienoate and Trienoate Geometric Isomers by Silver-Resin Column and Preparative Gas-Liquid Chromatography** ..... 10:00  
*E. A. Emken, E. N. Frankel, V. L. Davison and C. R. Scholfield, USDA, Northern Regional Research Laboratory*
84. **Gas-Liquid Chromatography of the Positional Isomers of Methyl Nonynoate** ..... 10:20  
*Henry Rakoff and R. E. Anderson, Texas A. and M. University*
85. **Comparison of Gas Chromatographic Techniques** ..... 10:40  
*F. H. Fryer and O. D. Decker, Standard Brands Incorporated*
86. **Collection of Methyl Esters in Preparative Gas-Liquid Chromatography via Electrostatic Precipitation Technique** ..... 11:00  
*L. Borcka and O. S. Privett, Hormel Institute and University of Minnesota*
87. **Silane Treatment of Solid Supports for Gas Chromatography** ..... 11:20  
*W. R. Supina, R. S. Henly and R. S. Krupa, Applied Science Laboratories, Incorporated*
- 87a. **Simplified Micro-ozonolysis Procedures for Quantitative Determination of Double Bond Positions** ..... 11:40  
*V. L. Davison and H. J. Dutton, USDA, Northern Regional Research Laboratory*

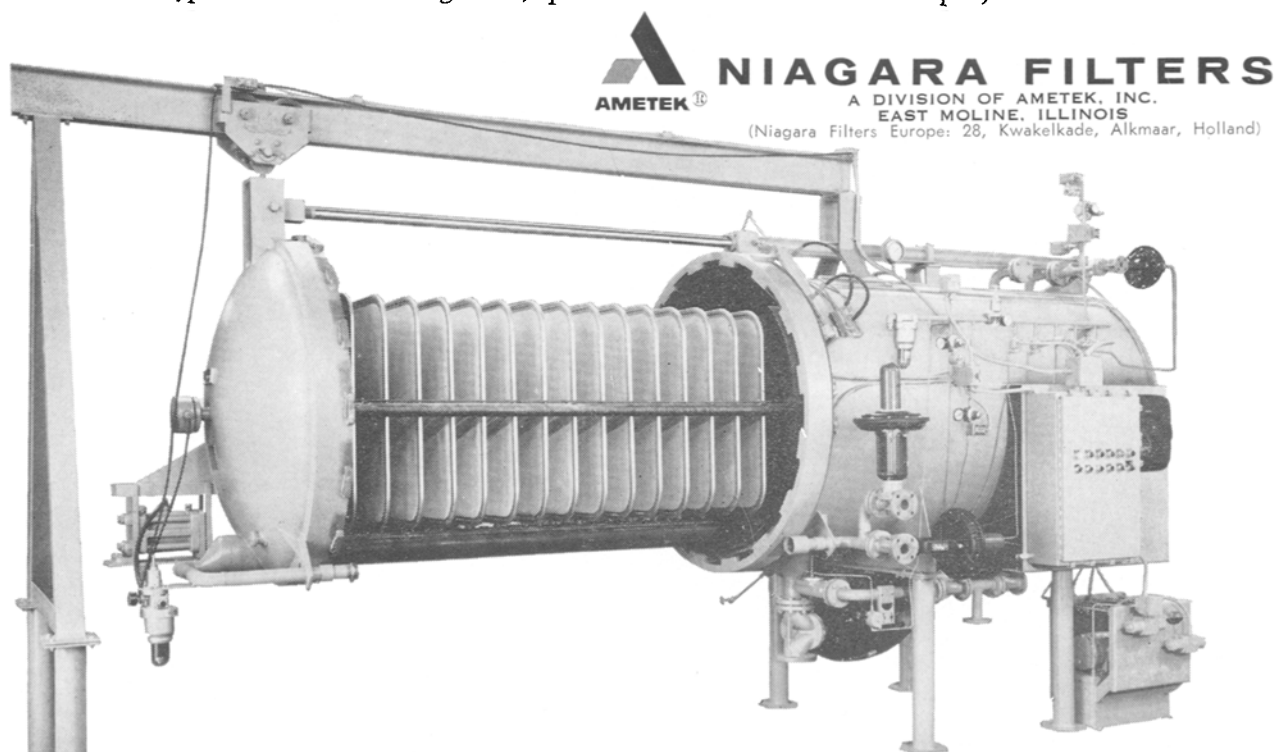
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**WEDNESDAY MORNING, OCTOBER 13, 1965**

**SESSION C—PARLORS A-D**

**SESSION ON ENGINEERING—PROCESSING—SAFETY**

Chairman: F. M. Bloomberg, Arkansas Grain Corporation

Discussions Begin ..... 9:00

**WEDNESDAY AFTERNOON, OCTOBER 13, 1965**

**SESSION A—HALL OF MIRRORS**

**BIOCHEMISTRY**

Chairman: J. H. Benedict, The Procter and Gamble Company

88. **Plasmalogens in Phospholipids of Chicken Muscle** ..... 2:00  
C. F. Peng and L. R. Dugan, Michigan State University

89. **Avidin Inhibition of Long-Chain Fatty Acid Synthesis in Mitochondria** ..... 2:20  
J. P. Jordan and E. B. Harris, Oklahoma City University

90. **Metabolism of the Alkoxy, Alkenyl and Diacyl Ethanolamine Phospholipids in Brains of Adult Rats** ..... 2:40  
L. A. Horrocks and G. B. Ansell, University of Birmingham, England

91. **The Deposition and Metabolism of  $\alpha$ -Batyl Alcohol- $1^{14}C$  in the Rat** ..... 3:00  
Fred Snyder, Claude Plantadosi and Ed Oswald, Oak Ridge Institute of Nuclear Studies and University of North Carolina

**WEDNESDAY AFTERNOON, OCTOBER 13, 1965**

**SESSION B—PAVILLION CAPRICE**

**ANALYTICAL CHEMISTRY**

Chairman: Herman Weiser, Jr., The Procter & Gamble Company

92. **Further Studies on a Serial Method for Oil Determination in Oil Seed** ..... 2:00  
Iars-Ake Appelqvist, Swedish Seal Association, Svalöv, Sweden

93. **A Study of "The Swedish Method" for Determination of Oil Content in Plant Seeds** ..... 2:20  
F. W. Hougen, and (Mrs.) V. Bodo, University of Manitoba, Winnipeg, Manitoba, Canada

94. **Gas-Liquid Chromatography of Natural Triglycerides Containing  $C_{20}$ ,  $C_{22}$  and  $C_{24}$  Fatty Acids** ..... 2:40  
R. D. Harlow, Carter Litchfield and Raymond Reiser, Department of Biochemistry and Nutrition, Texas Agricultural Experiment Station

95. **Chromatography of Polar Triglycerides on Silicic Acid Columns** ..... 3:00  
C. D. Evans, D. G. McConnell, R. L. Hoffman and Helen M. Peters, USDA, Northern Regional Research Laboratory

**WEDNESDAY AFTERNOON, OCTOBER 13, 1965**

**SESSION C—PARLORS A-D**

**FATTY ACID CHEMISTRY**

Chairman: F. O. Barrett, Emery Industries Incorporated

96. **Preparation of the Vinyl Ester of the Diels-Alder Adduct of Petroselinic Acid and Hexachlorocyclopentadiene** ..... 1:40  
J. P. Moreau, R. L. Holmes and G. Sumrell, USDA, Southern Regional Research Laboratory

97. **The 1,2-Cycloaddition of Haloalkenes to Conjugated Fatty Esters** ..... 2:00  
E. W. Bell, J. P. Friedrich, L. E. Gast and J. C. Cowan, USDA, Northern Regional Research Laboratory

98. **Esterification of Fatty Acid Double Bonds** ..... 2:20  
L. T. Black and R. E. Beal, USDA, Northern Regional Research Laboratory

99. **Preparation of Linseed Acid Chlorides** ..... 2:40  
E. J. Dujek, L. E. Gast and W. J. De Jarlais, USDA, Northern Regional Research

100. **NMR Spectra of Substituted Fatty Esters** ..... 3:00  
A. P. Tulloch, Prairie Regional Laboratory, Saskatoon, Saskatchewan

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