

56th Annual Meeting Program

MONDAY MORNING, APRIL 26, 1965

SESSION A—GRECIAN ROOM

P. HILDITCH SYMPOSIUM ON ANALYSIS OF NATURAL FAT TRIGLYCERIDES

Chairman: Carter Litchfield, Texas A&M University.

- Introductory Remarks** 9:40
Carter Litchfield.
- 1. T. P. Hilditch** 9:50
F. D. Gunstone,* University of St. Andrews, St. Andrews, Scotland.
- Presentation of Award** 10:10
- 2. The Study of Natural Fat Triglycerides—Retrospect and Prospect** 10:20
T. P. Hilditch, Birkenhead, Cheshire, England (presented by *W. C. Ault*).
- 3. Structure of Unsaturated Glycerides Determined by Countercurrent Distribution and Lipase Hydrolysis** 10:40
C. D. Evans, *D. G. McConner*, *C. R. Scholfield* and *H. J. Dutton*, Northern Regional Research Laboratory.
- 4. Glycerides of Kamalaseed Oil** 11:00
K. T. Achay, *M. R. Subbaram* and *A. Rajiah*, Regional Research Laboratory, Hyderabad, India.
- 5. The Pancreatic Hydrolysis of Natural Fats. IV. Some Exotic Seed Fats** 11:20
M. H. Coleman, Unilever Research Laboratory, Bedford, England.
- 6. Semiquantitative Analysis of Fats by Thin Layer Chromatography of the Alkyl Esters of the Products of von Rudloff Oxidation** 11:40
R. J. VanderWal, Armour and Co.

MONDAY MORNING, APRIL 26, 1965

SESSION B—CAMELLIA ROOM

PROF. ERNST KLENK SYMPOSIUM ON GLYCOLIPIDS AND THE NERVOUS SYSTEM

Chairman: Professor Folch-Pi, Harvard Medical School and McLean Hospital.

- Welcome** 9:40
George Rouser, City of Hope Medical Center.

* Speakers are shown in italics.

- Introductory Comments** 9:45
Professor Folch-Pi.
- 7. Historical Observations** 9:50
Professor Klenk, The University, Cologne, Germany.
- 8. The Structure and Chemistry of Sulfatides** 10:05
P. Stoffyn, McLean Hospital, Belmont, Mass.
- 9. The Structure of the Gangliosides** 10:35
Robert Ledeen, Albert Einstein Medical School.
- 10. Lipids of Subcellular Particles of Brain** 11:35
A. Siakotos, Army Chemical Center.

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SESSION C—AZALEA ROOM

SURFACTANT CHEMISTRY

Chairman: Eric Jungermann, Armour and Co.

- 11. Sulfonation of Hexadecene-1 and Octadecene-1** 9:40
J. K. Weil, *A. J. Stirton* and *E. D. Smith*, Eastern Regional Research Laboratory.
- 12. Salts of Alkyl Esters of α -Sulfolimic and α -Sulfostearic Acids** 10:00
A. J. Stirton, *R. G. Bistline, Jr.*, *E. A. Barr* and *M. V. Nunex-Ponzoa*, Eastern Regional Research Laboratory.
- 13. Synthesis of *n*-Alkybenzene by Telomerization of Ethylene with Aromatic Hydrocarbons** 10:20
W. A. Rutt and *C. C. Eberhardt*, Sun Oil Company.
- 14. The Reaction of Ethylene Oxide with Oleic Acid** 10:40
G. J. Stockburger, *J. D. Bradner*, Atlas Chemical Industries.
- 15. Rearrangement of Fatty Ethanolamides** 11:00
M. R. Samal, *D. H. Wheeler* and *J. Wicklatz*, Central Research Laboratories, General Mills.
- 16. Analysis of Surfactants Using Pyrolysis-Gas Chromatography** 11:20
T. H. Liddicoet and *L. H. Smithson*, California Research Corporation.
- 17. The Titration of Long-Chain Quaternary Ammonium Compounds Using Tetraphenylboron** 11:40
L. D. Metcalfe, *R. J. Martin* and *A. A. Schmitz*, Armour Industrial Chemical Co.

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Houston Technical Program Schedule

Room	Monday, AM	Monday, PM	Tuesday, AM	Tuesday, PM	Wednesday, AM
Grecian	Session A	Session F	Session L	Session Q	Session U
	← T. P. Hilditch Symposium on Natural Fat Triglycerides →				General
Camellia	Session B	Session G	Session M	Session R	Session W
	← Ernst Klenk Symposium on Glycolipids and the Nervous System →		Brain Sterol Metabolism	← General Lipid Metabolism →	
Azalea	Session C	Session H	Session N	Session S	Session X
	← Surfactants →		Fatty Acid Chemistry	Glandless Cottonseed	Lipids of the Past and Present
Continental	Session D	Session J	Session P	Session T	
	Analytical Methods	← Fatty Acid Chemistry →			Open Period
Blue Bonnet	Session E	Session K			Session Y
	Industrial Fat Processing	Data Processing in Fat and Oil Ind.	Open Period	Open Period	Mycotoxins Products

Houston Program

(Continued from page 90A)

18. **Analysis of Alpha Olefins Using a Gas-Chromatograph Mass Spectrometer Combination** 12:00
J. W. Green, L. H. Smithson, C. F. Spencer and R. M. Teeter, California Research Corporation.

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SESSION D—CONTINENTAL ROOM

ANALYTICAL METHODS

Chairman: Robert T. O'Connor, Southern Regional Research Laboratory.

19. **Determination of the Specific Positions of *cis* and *trans* Double Bonds in Polyunsaturated Fatty Acids** 9:40
O. S. Privett and E. C. Nickell, The Hormel Institute.
20. **A Colorimetric Method for the Determination of Epoxides Using Picric Acid, and Its Application to Heated Fats** 10:00
J. A. Fioriti, A. P. Bentz and R. J. Sims, General Foods Technical Center.
21. **Micro Vapor-Phase Hydrogenation Monitored with Tandem Chromatography-Radioactivity. II. Evaluation of Catalyst Selectivity for Linolenate** 10:20
T. L. Mounts and H. J. Dutton, Northern Regional Research Laboratory.
22. **The Dilution-HBr Titration Technique as a General Analytical Tool for Cyclopropenoid Fatty Acids** 10:40
F. C. Magne, J. A. Harris and E. L. Skau, Southern Regional Research Laboratory.
23. **Interference of Peroxides with the Determination of Total Carbonyls in Autoxidized Fats** 11:00
G. R. Mizuno and J. R. Chipault, The Hormel Institute.
24. **Gas-Solid Chromatography of Hydrocarbons on Activated Alumina** 11:20
G. R. List, R. L. Hoffman and C. D. Evans, Northern Regional Research Laboratory.
25. **Dielectric Properties of Long-Chain Esters of Fatty Acids in the Solid State** 11:40
James Hunter and C. R. Eddy, Eastern Regional Research Laboratory.

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SESSION E—BLUE BONNET ROOM

PROCESSING

Chairman: A. C. Wamble, Cottonseed Products Research Laboratory, Texas A&M University.

26. **Effect of Internal Distributors in a Packed Column on the Steam Stripping of Hexane from Soybean Oil** 9:40
L. K. Arnold and R. Schutter, Iowa State University.
27. **Modification of Design of Mechanical Screw Press Worms to Permit Easy Dismantling** 10:00
M. Allabaksh and S. D. Thirumala Rao, Oil Technological Research Institute, Anantapur, India.
28. **Pilot Plant Production of Aldehydic Products from Aqueous Vegetable Oil Dispersions** 10:20
K. J. Moulton, R. E. Beal, L. T. Black and E. L. Griffin, Jr., Northern Regional Research Laboratory.
29. **Method of Producing Whole Defatted Peanuts** 10:40
H. L. E. Vix, J. J. Spadaro, J. Pominski, H. M. Pearce, Southern Regional Research Laboratory.

MISCELLA REFINING

Chairman: A. C. Wamble, Texas A&M University.

30. **Recent Observations on Miscella Refining** 11:00
L. R. Watkins, Anderson, Clayton & Company, Mexican Mills.
31. **Miscella Refining** 11:20
G. C. Cavanagh, Ranchers Cotton Oil.
32. **Miscella Refining** 11:40
Roy B. Davis, Plains Cooperative Oil Mill.

MONDAY AFTERNOON, APRIL 26, 1965

SESSION F—GRECIAN ROOM

T. P. HILDITCH SYMPOSIUM ON ANALYSIS OF NATURAL FAT TRIGLYCERIDES

Chairman: R. G. Jensen, University of Connecticut.

33. **Synthesis and Analysis of Optically Active Triglycerides** 2:00
Wilhelm Schlenk, Badische Anilin & Sodafabrik, Ludwigshafen/Rh., Germany.
34. **The Detection of Optical Activity in Asymmetric Triglycerides** 2:40
L. J. Morris, Unilever Research Laboratory, Bedford, England.
35. **The Triglyceride Composition of *Myrica carolinensis* Fruit Coat Fat** 3:00
R. D. Harlow, C. Litchfield, H. C. Fu and Raymond Reiser, Texas Agricultural Experiment Station.
36. **Application of Statistical Distribution Formulas to Triglycerides Originating in Tissues Having Regional Differences in Fatty Acid Composition** 3:20
Carter Litchfield and Raymond Reiser, Texas Agricultural Experiment Station.
37. **Application of Computer Methods to the Calculation of Triglyceride Structure** 3:40
E. G. Perkins and A. V. Hanson, University of Illinois.
38. **The Glyceride Composition of Seed Oils Rich in Linoleic and/or Linolenic Acid** 4:00
F. D. Gunstone, F. B. Padley and M. I. Qureshi, University of St. Andrews, Scotland.
39. **Evaluation of Mathematical Distribution Methods for the Determination of Triglyceride Composition** 4:20
M. L. Blank and O. S. Privett, The Hormel Institute.
40. **The Triglyceride Composition of Linseed Oil** 4:40
A. G. Vereshchagin and G. V. Novitskaya, Timiriazev Institute of Plant Physiology, Academy of Sciences, Moscow, USSR.

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SESSION G—CAMELLIA ROOM

SYMPOSIUM: GLYCOLIPIDS AND THE NERVOUS SYSTEM

Chairman: R. M. Burton, Washington University Medical School.

- Introductory Comments** 2:00
R. M. Burton.
41. **Glycolipid Haptens** 2:05
R. O. Brady, National Institute of Neurological Diseases and Blindness.
42. **Antigenic Properties of Synthetic Protein Complexes with Glycolipids and Related Substances** 2:45
Professor Yamakawa, University of Tokyo, Japan.
43. **Metabolism of Glycolipids in Experimental Neurological Diseases** 3:15
S. G. Eliasson, Washington University School of Medicine.
- Coffee Break** 3:55
44. **Turnover of Glycolipids and Their Fatty Acids in Developing Rat Brain** 4:15
Y. Kishimoto, W. E. Davies and N. S. Radin, Mental Health Research Institute, University of Michigan.

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Analyses and Research
REID H. LEONARD, Ph.D.
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 P. O. BOX 2334
PENSACOLA, FLORIDA 32503

Houston Program

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45. **The Biogenesis of the Glycolipid Fatty Acids** 4:45
J. F. Mead and *R. C. MacDonald*, University of California, Los Angeles.
46. **Glycolipids of the Human and Bovine Lens** 5:15
G. L. Feldman, Baylor University College of Medicine.

MONDAY AFTERNOON, APRIL 26, 1965

SESSION H—AZALEA ROOM

DETERGENT PERFORMANCE

Chairman: Arno Cahn, Lever Brothers.

47. **Dimensional Analysis Applied to Detergency** 2:00
A. M. Mankowich, U. S. Army Coating & Chemical Laboratory, Aberdeen Proving Ground, Md.
48. **Micelle Formation of Polyoxyethylene-Polyoxypropylene Surfactants** 2:20
I. R. Schmolka, A. J. Raymond, Wyandotte Chemical Corp.
49. **Performance Characteristics of Sucrose Ester Detergents** 2:40
A. M. Schwartz and *C. A. Rader*, Harris Research Laboratories.
50. **Straight-Chain Alkybenzenes: Structure and Performance Property Relations. III. Light-Duty Dishwashing Formulations** 3:00
R. M. Anstett, Colgate-Palmolive Research Center; *J. Rubinfeld*, Colgate Research & Development Dept.
51. **Statistical Approach to Detergency. Part III. Effect of Artificially Soiled Test Cloth** 3:20
M. E. Ginn, G. A. Davis and E. Jungermann, Armour Grocery Products Company.
52. **The Foam Performance of Ternary Surfactant Compositions in Light-Duty Liquids** 3:40
H. Stupel, Shell Chemical Company.
53. **Some Detergent Properties of Model Straight Chain Sodium Alkylbenzene-Sulfonates** 4:00
F. W. Gray, *I. J. Krems* and *J. F. Gerecht*, Colgate-Palmolive Research Laboratory.
54. **Manufacturing Processes of Linear Alkylate Sulfonic Acids** 4:20
R. W. Warren, Olefins Division, Union Carbide Corporation.
55. **Performance Evaluation of Selected Fabric Softeners** 4:40
M. E. Ginn and *E. Jungermann*, Armour Grocery Products Co.

MONDAY AFTERNOON, APRIL 26, 1965

SESSION J—CONTINENTAL ROOM

CHEMISTRY OF FATS

Chairman: W. O. Lundberg, Hormel Institute.

56. **Determination of Chick Edema Factor by Electron Capture** 2:00
C. C. Galeener, Wilson & Co.

57. **A Comparison of Nuclear Magnetic Resonance and Dilatometry for Estimating Solids Content of Fats & Shortenings** 2:20
D. W. Pohle, J. R. Taylor and R. L. Gregory, Swift & Company.
58. **A Simplified Process for the Elimination of the Halphen-Test Response in Cottonseed Oils** 2:40
E. T. Rayner, L. E. Brown and *H. P. Dupuy*, Southern Regional Research Laboratory.
59. **The Preparation and Purification of Monoglycerides** 3:00
L. K. Arnold and *H. Bengston*, Iowa State University.
60. **Linseed Oil Emulsions for Protecting Concrete** 3:20
W. L. Kubie and *J. C. Cowan*, Northern Regional Research Laboratory.
61. **A Systematic Characterization of the Reversion Flavor of Soybean Oil** 3:40
T. H. Smouse and *S. A. Chang*, Department of Food Science, Rutgers University.
62. **The Buttery Flavor of Reverted Soybean Oil** 4:00
R. G. Seals and *E. G. Hammond*, Iowa State University.
63. **Crambe Seed Processing: Improved Feed Meal by Ammoniation** 4:20
L. D. Kirk, G. C. Mustakas and *E. L. Griffin, Jr.*, Northern Regional Research Laboratory.
64. **Natural Clays for Bleaching Edible Vegetable Oils** 4:40
A. Greentree, The Milwhite Company.

MONDAY AFTERNOON, APRIL 26, 1965

SESSION K—BLUE BONNET ROOM

DATA PROCESSING IN THE FATS AND OILS INDUSTRIES

Chairman: W. E. Link, Archer-Daniels-Midland Co.

65. **Computers—From Curiosity to Tool in a Decade** 2:00
R. L. Smith, Data Processing Center, Texas A&M University.
66. **Applications of an Amalog Computer in Lipid Chemistry** 2:20
H. J. Dutton, Northern Regional Research Laboratory.
67. **Computer Paper Cost Reduction** 2:40
D. W. Whitson and *H. Smith*, Procter & Gamble.
68. **Process Study at Atlas Chemical** 3:10
H. M. Truax, Atlas Chemical.
69. **Evolutionary Operation** 3:40
P. W. Tidwell, Monsanto Chemical Co.

TUESDAY MORNING, APRIL 27, 1965

SESSION L—GRECIAN ROOM

T. P. HILDITCH SYMPOSIUM ON ANALYSIS OF NATURAL FAT TRIGLYCERIDES

Chairman: O. S. Privett, The Hormel Institute.

70. **Quantitative Gas-Liquid Chromatography of Triglycerides** 9:00
C. Litchfield, R. D. Harlow and *Raymond Reiser*, Texas A&M University.
71. **Gas Chromatographic Resolution of Butter Oil and Synthetic Triglycerides Beyond Their Carbon Numbers** 9:40
A. Kuksis and *W. C. Breckenridge*, Queen's University, Kingston, Ontario.
72. **Stereospecificity of a Lipase System from *Geotrichum candidum*** 10:00
R. G. Jensen, *J. Sampugna*, *J. G. Quinn* and *J. A. Alford*, University of Connecticut.
73. **Production of Microbial Lipases for the Study of Triglyceride Structure** 10:20
J. A. Alford and *J. L. Smith*, U. S. Dept. of Agriculture.
74. **Application of Thin Layer Chromatography to the Quantitative Estimation of Tissue Triglycer-**

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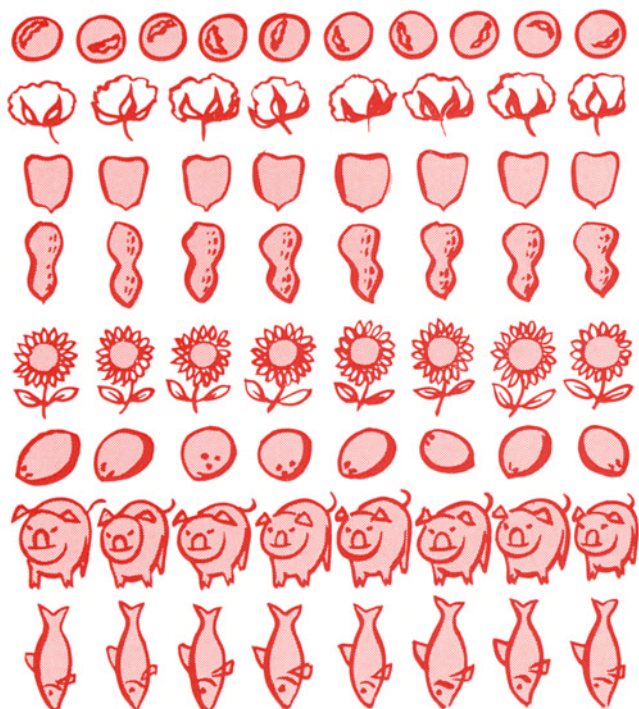
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Houston Program

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- ides: Influence of Methylparathion in the Diet on the Liver Triglycerides in the Rat** 10:40
M. R. Sahasrabudhe, Food and Drug Directorate, Ottawa, Canada.
- 75. Structure of the Intestinal Mucosa and Lymph Glycerides After Absorption of Fats Containing Elaidic Acid** 11:00
J. Clement, G. Lavoue and G. Clement, Faculty of Science, Dijon, France.
- 76. Composition and Structure of Triglycerides from Dietary Fats and Rat Organs** 11:20
H. Kavnitz, R. E. Johnson and J. Miraglia, Columbia University.
- 77. Indications of *in Vitro* and *in Vivo* α_1 -Specificity of Rat Epididymal Lipase Under Epinephrine Stimulation. Applications** 11:40
Jeanine Raulin, M. Launay and R. Jaquot, Centre de Recherches sur la Nutrition, Paris-Bellevue, France.

TUESDAY MORNING, APRIL 27, 1965

SESSION M—CAMELLIA ROOM

SYMPOSIUM: BRAIN STEROL METABOLISM

Chairman: David Kritchevsky, Wistar Institute.

- 78. Brain Cholesterol Metabolism in Adult Animals** 9:00
J. J. Kabara, University of Detroit.
- 79. Cholesterol Turnover in the Central Nervous System** 9:30
H. J. Nicholas, Institute of Medical Education & Research.
- 80. The Turnover of the Lipid Components of Myelin** 10:00
Marion E. Smith, V. A. Hospital, Palo Alto, Calif.
- 81. Pharmacological Modification of Brain Sterol Composition** 10:30
R. Fumagalli and R. Paoletti, University of Milan, Italy; *R. Niermiro*, University of Gdansk, Poland.
- 82. Occurrence of Desmosterol in Developing Rat Brain** 11:00
D. Kritchevsky, S. A. Tepper, Wistar Institute; *N. W. DiTullio and W. L. Holmes, Smith, Kline French*.
- Discussion** 11:30

TUESDAY MORNING, APRIL 27, 1965

SESSION N—AZALEA ROOM

BIODEGRADABILITY

Chairman: A. M. Mankowich, Aberdeen Proving Ground.

- 83. Ultraviolet Spectroscopic Analysis for Following the Biodegradation of Hydrotrops** 9:00
E. A. Setzkorn and R. L. Huddleston, Research & Development, Continental Oil Co.
- 84. Biodegradability of Ethoxylated Alkyl Phenol Surfactants** 9:20
R. L. Huddleston and R. C. Allred, Continental Oil Co.
- 85. Biodegradation Studies on A p,t-Octylphenoxy-polyethoxyethanol** 9:40
E. S. Lashen, F. A. Blankenship, K. A. Booman and J. Dupre, Rohm & Haas Company.
- 86. Foam Generation Method for Evaluating Biodegradability** 10:00
L. R. Bacon, Wyandotte Chemicals Corp.
- 87. Field Study of the Removal of LAS Detergents by the Activated Sludge Process (Kettle Moraine Boy's School Detergent Study)** 10:20
P. V. Knopp, L. J. Uhren, G. A. Rohlich and M. S. Nichols, University of Wisconsin.

FATTY ACID CHEMISTRY

Chairman: Hermann Schlenk, Hormel Institute.

- 88. Autoxidation of Fatty Material in Emulsion. IV. The Influence of Chemical Structure on the Oxidative Effect of Basic Amino Acids in Methyl**

Linoleate Emulsions	11:00
<i>D. H. Saunders and J. W. Hampson, Eastern Regional Research Laboratory.</i>	
89. Autoxidation of Cholesteryl Linoleate in Aqueous Colloidal Suspension	11:20
<i>L. N. Norcia and W. F. Janusz, Temple University Medical School.</i>	
90. Hydrogen Formation During Hydrazine Reduction of Oleic Acid	11:40
<i>E. D. Bitner and H. J. Dutton, Northern Regional Research Laboratory.</i>	

TUESDAY MORNING, APRIL 27, 1965

SESSION P—CONTINENTAL ROOM

FATTY ACID CHEMISTRY

Chairman: I. A. Wolff, Northern Regional Research Laboratory.

91. The Distribution of Partial Fatty Acid Esters of Glycerol and Propylene Glycol	9:00
<i>R. R. Allen and L. D. Williams, Anderson, Clayton & Company.</i>	
92. Glycolipids of <i>Briza spicata</i> Seed	9:20
<i>G. R. Smith, Jr. and I. A. Wolff, Northern Regional Research Laboratory.</i>	
93. Unusual C_{17} and C_{18}-Hydroxy Acids of <i>Acanthosyrhis spinescens</i> Seed Oil	9:40
<i>R. G. Powell and C. R. Smith, Jr., Northern Regional Research Laboratory.</i>	
94. Synthesis and Isolation of Methyl Esters of α-Branched Fatty Acids	10:00
<i>G. Maerker, H. E. Kenney, A. Bilyk and W. C. Ault, Eastern Regional Research Laboratory.</i>	
95. Labellenic Acid: A New Allenic Acid from <i>Leonitis nepetaefolia</i> Seed Oil	10:20
<i>M. O. Bagby, C. R. Smith, Jr., and I. A. Wolff, Northern Regional Research Laboratory.</i>	
96. Conjugated Dienes and Trienes from Methyl Oleate and Methyl Linoleate	10:40
<i>Theodore Perlstein, A. Eisner and W. C. Ault, Eastern Regional Research Laboratory.</i>	
97. The Perchloric Acid Isomerization of Monoethylenic Compounds	11:00
<i>J. S. Showell and T. S. Shepherd, Eastern Regional Research Laboratory.</i>	
98. Alkaline Cleavage of Hydroxy Unsaturated Fatty Acids. I. Ricinoleic Acid and Lesquerolic Acid	11:20
<i>M. J. Diamond, R. G. Binder and T. H. Applewhite, Western Regional Research Laboratory.</i>	
99. Isomerization of Unsaturated Fatty Esters by Iron Pentacarbonyl	11:40
<i>E. N. Frankel, E. A. Emken and V. L. Davison, Northern Regional Research Laboratory.</i>	

TUESDAY AFTERNOON, APRIL 27, 1965

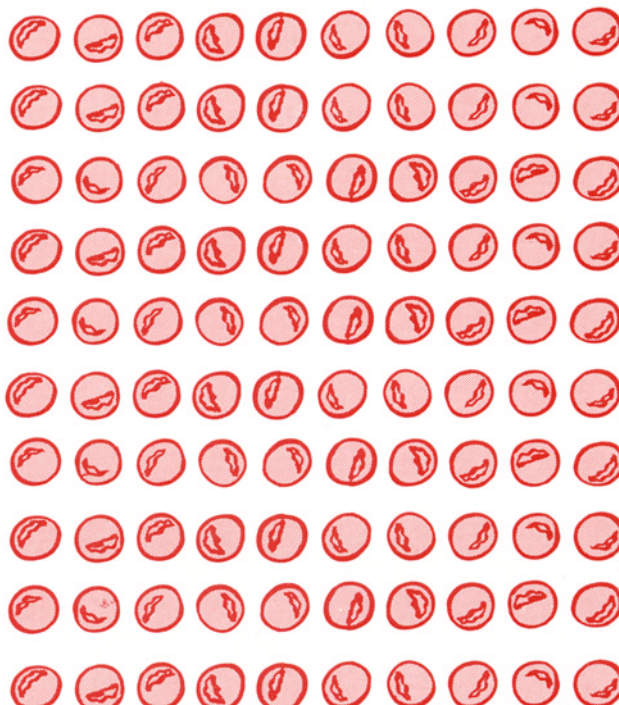
SESSION Q—GRECIAN ROOM

T. P. HILDITCH SYMPOSIUM ON ANALYSIS OF NATURAL FAT TRIGLYCERIDES

Chairman: K. T. Achaya, Regional Research Laboratory, Hyderabad, India.

100. Analysis of Triglyceride Mixtures Using Various Combinations of Separation Techniques	2:00
<i>C. G. Youngs, National Research Council of Canada, Saskatoon, Sask.</i>	
101. Characterization of Sable Fish Oil Triglycerides (<i>Anaplopoma fimbria</i>)	2:40
<i>H. S. Olcott and Ami Dolev, University of California.</i>	
102. Detection and Determination of Mono-5(4)-Hydroxy-Acid Triglycerides and $\delta(\gamma)$-Lactones in Butter	3:00
<i>G. Jurriens and J. M. Oele, Unilever Research Laboratory, Vlaardingen, The Netherlands.</i>	
103. Analysis of Triglycerides by Consecutive Chromatographic Techniques. II. Uchuba Kernel Fat	3:20
<i>T. W. Culp, R. D. Harlow, C. C. Litchfield and Raymond Reiser, Texas A&M University.</i>	

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104. **The Structures of Triglycerides in Three Selected Seed Oils Containing Erucic Acid** 3:40
H. Grynberg and *H. Szczeplanska*, Institute of General Chemistry, Warsaw, Poland.
105. **Fungal Triglycerides** 4:00
R. C. M. Jack, Boyce Thompson Institute.
106. **The Structure of the Glycerides of Ergot Oil** 4:20
L. J. Morris and *S. W. Hall*, Unilever Research Laboratory, Bedford, England.
107. **The Distribution of Some Less Common Unsaturated Acids in Vegetable Triglycerides** 4:40
F. D. Gunstone, *R. J. Hamilton*, *F. B. Padley* and *M. I. Qureshi*, University of St. Andrews, Scotland.

TUESDAY AFTERNOON, APRIL 27, 1965

SESSION R—CAMELLIA ROOM

LIPID METABOLISM

Chairman: *R. T. Holman*, Hormel Institute.

108. **Studies on the Protein Moieties of Human Serum Lipoproteins** 2:00
P. Alaupovic and *H. R. Furman*, Oklahoma Medical Research Institute.
109. **Triglyceride Metabolism in Diabetes** 2:20
Murray Heimberg, *A. Dunkerlay* and *T. O. Brown*, Vanderbilt University.
110. **Further Studies on Metabolism of C¹⁴-Labeled Erucic Acid and Nervonic Acid** 2:40
K. K. Carroll, University of Western Ontario, London, Ont.
111. **Synthesis and Interconversions of Fatty Acids in the Soybean** 3:00
E. M. Stearns, Jr., and *F. M. Quackenbush*, Purdue University.
112. **Phospholipases of Rat Tissues** 3:20
A. Ottolenghi, Duke University Medical Center.
113. **Phospholipids of Human Serum** 3:40
J. H. Williams, *M. Kuchmak* and *R. F. Witter*, Communicable Disease Center, Public Health Service.
114. **The Plasmalogens of Cardiac Muscle** 4:00
M. H. Hack and *F. M. Helmy*, Tulane University School of Medicine.
115. **The Use of Solvent Extracted Cottonseed Meal in Swine Rations** 4:20
C. M. Lyman and *Fred Hale*, Texas A&M University.
116. **Fatty Acids of Bovine Milk Glycolipids and Phospholipids and Their Specific Distribution in the Diacylglycerophospholipids** 4:40
W. R. Morrison, *E. L. Jack* and *L. M. Smith*, University of California.

TUESDAY AFTERNOON, APRIL 27, 1965

SESSION S—AZALEA ROOM

GLANDLESS COTTONSEED

Chairman: *Garlon Harper*, National Cottonseed Products Association.

117. **Characteristics of Glandless Cottonseed Oil** 2:00
R. O. Simmons, *R. P. Choi* and *P. W. Morgan, Jr.*, Hunt Foods.
118. **The Processing and Storage Characteristics of Glandless Cottonseed** 2:30
J. T. Lawhon and *A. C. Wamble*, Texas A&M University.
119. **Nutritive Characteristics of Glandless Cottonseed Protein** 3:00
A. B. Watts, Louisiana State University.
120. **The Genetic Background and Current Status of Glandless Cotton Breeding** 3:30
C. F. Lewis, Agricultural Research Service.
121. **Identification of Arginine as the N-Terminal Amino Acid of Glandless Cottonseed** 4:00
C. Pratt and *L. Merritt*, Savannah State College.

TUESDAY AFTERNOON, APRIL 27, 1965

SESSION T—CONTINENTAL ROOM

NEW PLANT LIPIDS

Chairman: *F. W. Quackenbush*, Purdue University.

122. **Search for New Industrial Oils. XIV. Seed Oils of the Family Labiatae** 2:00
J. W. Hagemann, *F. R. Earle* and *I. A. Wolff*, Northern Regional Research Laboratory.
123. **Isolation of Pure Unsaturated Fatty Acids from Ginkgo Lipids** 2:20
J. L. Gellerman and *H. Schlenk*, Hormel Institute.
124. **Concentration of the Cyclopropenoids in Cottonseed Oil** 2:40
W. Landmann, *Z. M. Zarins*, *R. K. Willich*, *J. L. White* and *R. O. Feuge*, Southern Regional Research Laboratory.

CHEMICAL REACTIONS OF FATTY ACIDS

Chairman: *R. R. Allen*, Anderson, Clayton & Co.

125. **Hydrogenation of Linolenate XIII: Sodium Borohydride-Reduced Catalysts** 3:00
S. Koritala and *H. J. Dutton*, Northern Regional Research Laboratory.
126. **A General Method for the Preparation of Saturated and Unsaturated Aliphatic Aldehydes** 3:20
V. Mahadevan, *F. Phillips* and *W. O. Lundberg*, The Hormel Institute.
127. **Catalytically Reduced Linolenic and Linoleic Acids as a Source of C₉, C₁₃, and C₁₅ Dibasic Acids** 3:40
A. E. Johnston, *S. Koritala* and *H. J. Dutton*, Northern Regional Research Laboratory.
128. **Chemical Reactions Involved in the Catalytic Hydrogenation of Oils III. Further Identification of Volatile by-products** 4:00
T. Kawada and *S. S. Chang*, Rutgers University.
129. **Volatile Products from Mild Oxidation of Methyl Linoleate** 4:20
R. J. Horvat, *W. H. McFadden*, *N. Ng*, *D. R. Black* and *W. G. Lane*, Western Regional Research Laboratory.
130. **Preparation of Pure Fatty Methyl Esters by Counter Double Current Distribution** 4:40
C. R. Scholfield, *R. O. Butterfield* and *H. J. Dutton*, Northern Regional Research Laboratory.

WEDNESDAY MORNING, APRIL 28, 1965

SESSION U—GRECIAN ROOM

T. P. HILDITCH SYMPOSIUM ON ANALYSIS OF NATURAL FAT TRIGLYCERIDES

Chairman: *C. R. Scholfield*, Northern Regional Research Laboratory.

131. **Triglyceride Separations by Gas and Thin-Layer Chromatography** 9:00
N. Pelick, *T. L. Wilson* and *M. E. Miller*, Applied Science Laboratory, State College, Pa.
132. **The Unsolved Problems of Triglyceride Analysis** 9:20
M. H. Coleman, Unilever Research Laboratory, Bedford, England.
- GENERAL
133. **Quantitative Methods for Serum Glycerides Using Thin-Layer Chromatography** 10:00
V. S. Whitner, *O. T. Grier*, *A. N. Mann* and *R. F. Witter*, Communicable Disease Center, Public Health Service.
134. **The Simultaneous Determination of Both the Quantity and the Fatty Acid Composition of the Triglycerides in 3-10 Microliters of Serum** 10:20
C. Y. Bowers, *J. G. Hamilton*, *J. E. Muldrey*, *W. Miyamasu*, *G. A. Reynolds* and *A. V. Schally*, Tulane University School of Medicine.
135. **A Simple Oral Triglyceride Tolerance Test** 10:40
J. R. Swartout and *E. G. Herndon*, Emory University Medical School.

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Houston Program

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- 136. Isolation and Characterization of Triglycerides in Human Sebum by Thin-Layer Chromatography** 11:00
E. J. Singh, L. L. Gershbein and H. J. O'Neill, Northwest Institute for Medical Research and Illinois Institute of Technology.
- 137. Synthesis of Saturated Diacid Triglycerides for Use as Model Compounds in the Analysis of Natural Fat Triglycerides** 11:20
D. Rebello, P. K. Chopade and N. Krishnamurti, University of Bombay, India.
- 138. New Plant Sources of Epoxy Oils** 11:40
W. H. Tallent, J. W. Hagemann, F. R. Earle and I. A. Wolff, Northern Regional Research Laboratory.
- 139. Lipid Composition of Oat Varieties** 12:00
G. C. Potter and P. Petriak, The Quaker Oats Company.
- 140. The trans-3-enoic Acids of *Grindelia osyloplepis* Seed Oil** 12:20
R. Ktieman, F. R. Earle and I. A. Wolff, Northern Regional Research Laboratory.

WEDNESDAY MORNING, APRIL 28, 1965

SESSION W—CAMELLIA ROOM

LIPID METABOLISM AND ANALYSIS

Chairman: M. Heimburg, Vanderbilt University.

- 141. Recovery of Steroids from Liquid Scintillation Phosphors by Preparative Thin-Layer Chromatography** 9:00
Mary C. Williams and F. G. Boyd, Southwest Foundation for Research and Education.
- 142. Tracer Experiments to Assess Metabolic Conversions of Polyunsaturated Fatty Acids** 9:20
H. Mohrhauser and R. T. Holman, Hormel Institute.
- 143. Microanalysis of Lecithin Fatty Acid Composition by Thin-Layer Chromatography (TLC) and Gas-Liquid Chromatography (GLC)** 9:40
Paul Zee, J. E. Muldrey and O. N. Miller, Tulane University School of Medicine.
- 144. Effect of Calcium Upon Lipid Metabolism in the Mature Male Rat** 10:00
A. I. Fleishmann, H. Yacovitz T. Hayton and M. L. Bierenbaum, St. Vincent's Hospital, Montclair, N. J.
- 145. Effect of Ingestion of Isomeric Fatty Acids on Cholesterol and Lipids of Serum and Liver** 10:20
H. C. Tidwell and P. Gifford, Southwestern Medical School.
- 146. Competitive Interactions in the Metabolism of Polyunsaturated Fatty Acids Revealed by the Composition of Phospholipids, Triglycerides and Cholesteryl Esters of Rat Tissues** 10:40
P. T. Garcia and Ralph Holman, The Hormel Institute.
- 147. Interactions Between Deficiencies of Pyridoxine and Essential Fatty Acids** 11:00
W. O. Caster, University of Georgia.
- 148. Determination of the Structure of Lecithins** 11:20
M. L. Blank, L. J. Nutter and O. S. Privett, The Hormel Institute.
- 149. Characterization of the Lipids of Chylomicron Membrane, Fat Core and Lymph Serum of Dogs Following Corn Oil and Butter Feeding** 11:40
T. C. Huang and A. Kuksis, Queen's University, Kingston, Ont.
- 150. The Effect of Kind of Dietary Carbohydrate upon the Fatty Acid Composition of Liver Fatty Acids of the Rat** 12:00
Ralph Holman and J. J. Casal, The Hormel Institute.
- 151. Lipid Metabolism in the Fetus** 12:20
J. P. Feaster, Florida Agricultural Experiment Station, Gainesville.
- 152. The Lipid Composition of Human Brain Myelin** 12:40
J. S. O'Brien, University of Southern California School of Medicine.

WEDNESDAY MORNING, APRIL 28, 1965

SESSION X—AZALEA ROOM

SYMPOSIUM: LIPIDS OF THE PAST AND PRESENT

Chairman: B. Nagy, University of California.

- 153. Quantitative Analysis of Lipids by Neutron Activation** 9:00
J. M. Steim, Pennsylvania State University.
- 154. Thin-Layer Chromatographic Analysis of Sulfur Compounds and Hydrocarbons and its Application to Geochemical Problems** 9:30
Sister M. T. J. Murphy and B. Nagy, University of California.
- 155. The Geochemistry of Lipids** 10:00
I. A. Breger, Geological Survey, U.S. Dept. of Interior.
- 156. Lipids of Soil** 10:30
F. J. Stevenson, University of Illinois.
- 157. Lipids in Sea Water** 11:00
L. M. Jeffrey, Texas A&M University.
- 158. Alkanes in Natural Aqueous Systems** 11:30
G. W. Hodgson and E. Peake, Research Council of Alberta, Edmonton.
- 159. The Lipids of Coral Reef Organisms** 12:00
B. F. Pasby, University of Hawaii; B. S. Cooper and D. W. Hood, Texas A&M University.
- Discussion** 12:30

WEDNESDAY MORNING, APRIL 28, 1965

SESSION Y—BLUE BONNET ROOM

MYCOTOXINS

Chairman: C. M. Lyman, Texas A&M University.

- 161. Review of the Chemistry and Biological Effects of the Aflatoxins** 9:00
G. N. Wogan, Massachusetts Institute of Technology.
- 162. The USDA Research Program on Mycotoxins** 9:40
G. W. Irving, Jr., Agricultural Research Service, USDA.
- 163. Evaluation of Analytical Procedures for the Determination of Aflatoxins** 10:10
W. A. Pons, Jr., Southern Regional Research Laboratory.
- 164. Toxic and Nontoxic Molds Found in Food Materials** 10:40
U. L. Diener, Auburn University.
- 165. Mouldy Feeds** 11:10
L. R. Richardson, Texas A&M University.
- 166. Aflatoxin Content of Individual Peanuts and Peanut Particles** 11:40
A. F. Cucullu, L. S. Lee, R. Y. Mayne and L. A. Goldblatt, Southern Regional Research Laboratory.

PRODUCTS

- 167. Cocoa Butter-like Fats from Fractionated Cottonseed Oil** 12:00
R. O. Feuge, B. B. Gajee and N. V. Lovegren, Southern Regional Research Laboratory.
- 168. N,N-Dialkylamides of Long Chain Fatty Acids as Plasticizers** 12:20
R. E. Mod, F. C. Magne and E. L. Skau, Southern Regional Research Laboratory.
- 169. Partial Esterification of Cotton with Unsaturated and Substituted Monobasic Acid Chlorides** 12:40
J. B. McKelvey, R. R. Benerito and R. J. Berni, Southern Regional Research Laboratory.

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 HOUSTON TECHNICAL PROGRAM
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