

72nd Annual Meeting



Fairmont Hotel May 17-21, 1981

Technical Program

Monday, May 18

10:00 a.m.—University Room

SESSION 1—Symposium: Biochemistry

Chairman: T.P. Hensarling, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 1. THE MAJOR LIPID FRACTIONS OF *Bryophyllum pinnatum* (Lim). Gregory E. Anekwe, University of Lagos, Nigeria
- 10:20 2. PHYTOPLANKTON LIPIDS. Neil S. Shifrin, Teknekron Research, Inc.
- 10:40 3. EFFECT OF SURFACTANTS ON YIELDS OF FUNGAL CARBOHYDRASES. Frederick W. Parrish, Southern Regional Research Center, USDA
- 11:00 4. OXIDATIVE DEGRADATION OF PHEROMONES IN LABORATORY AND FIELD EXPERIMENTS. I. Weatherston, P.W. Carlson, M.A. Golub, S.A. Phelan and J.M. Lee, Albany International
- 11:20 5. IMMUNOCHEMICAL ANALYSIS OF COTTON-SEED HULLS AND KERNELS FOR ANTIGENS FOUND IN COTTON DUST, BRACT, OR MICROBIAL ENDOTOXINS. Antonio A. Sekul and Robert L. Ory, Southern Regional Research Center, USDA
- 11:40 6. ARE TERPENOID SUBSTRATES BOUND TO P-450 HEMEPROTEINS VIA SULFHYDRYL GROUPS? Ralph I. Murray, John A. Bumpus and K.M. Dus, St. Louis University School of Medicine

10:00 a.m.—Creole Room

SESSION 2—Symposium: Flavor Technology of Foods I

Chairman: A.J. St. Angelo, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 INTRODUCTORY REMARKS.
- 10:05 7. CHEMICAL SENSES AND FOOD FLAVOR. James C. Boudreau, The University of Texas at Houston
- 10:30 8. ROLE OF LIPIDS IN MEAT FLAVOR. Milton E. Bailey, University of Missouri, J.C. Ching, Mary Kay Cosmetics, H.B. Hedrick, University of Missouri, M.G. Legendre, Southern Regional Research Center, USDA, and H.P. Dupuy, V-Labs
- 10:55 9. THE FLAVOR OF GRASS-FINISHED BEEF. Sharon L. Melton, The University of Tennessee
- 11:20 10. THE EFFECT OF FEED, PREPARATION, AND

PROCESSING ON FISH AND SEAFOOD FLAVOR. George J. Flick, Jr., Virginia Polytechnic Institute and State University, M.G. Legendre and A.J. St. Angelo, Southern Regional Research Center, USDA

10:00 a.m.—Explorer's Room

SESSION 3—Symposium: Surfactants, Evaluation, and Surface Chemistry I

Chairmen: Arno Cahn (presiding), Lever Brothers Co., Edgewater, NJ, and Ted Matson, Conoco Inc., Ponca City, OK

- 10:00 11. FOAM STABILITY IN AQUEOUS SURFACTANT/OIL SYSTEMS, II. THE ROLE OF GIBBS ELASTICITY IN FOAM STABILITY. J.A. Wingrave, Conoco Inc.
- 10:25 12. HLB AND HYDROPHOBE BRANCHING. Alain Graciaa, Universite de Pau et des Pays de l'Adour, and Y. Barakat, M. El-Emary, L. Fortney, R. Schecter, S. Yiv and W. Wade, The University of Texas
- 10:50 13. FADING RATE OF DYE IN MICELLES OF AMPHOTERIC SURFACTANTS. Hisao Hidaka, Yoshinori Takahashi and Hayashi Kubota, Meisei University, and Shuji Yoshizawa, Science University of Tokyo
- 11:15 14. PLUMING OF NONIONIC SURFACTANTS DURING THE SPRAY-DRYING PREPARATION OF POWDERED DETERGENTS: CAUSES, EFFECTS, AND POTENTIAL SOLUTIONS OF THIS PROBLEM. D.L. Wharry, A.B. Carel and E.L. Sones, Conoco Inc.
- 11:40 15. SURFACE ACTIVE AGENTS IN THE GLASS INDUSTRY: OPTIMIZATION OF AN INDUSTRIAL CHEMICAL CLEANING PROCESS OF GLASS LENSES. Uri Zoller, Haifa University, Oranim, Israel.

10:00 a.m.—Bayou I

SESSION 4—Symposium: Fats and Oils Processing

Chairman: John L. Schnake, PVO International Inc., San Francisco, CA

- 10:00 16. KINETICS OF BLEACHING OF VEGETABLE OILS. Ulla I. Brimberg, Alfa-Laval AB
- 10:20 17. DEGUMMING OF SOYBEAN OIL: QUANTITA-

TIVE ANALYSIS OF PHOSPHOLIPIDS IN CRUDE AND DEGUMMED OIL. Linda M. Drews and A. Philip Handel, University of Nebraska

- 10:40 18. THE UTILIZATION OF SUPERCRITICAL FLUIDS IN THE PURIFICATION AND FRACTIONATION OF FATS AND OILS. Alegria B. Caragay and Val Krukonis, Arthur D. Little, Inc.
- 11:00 19. NEW PALM OIL SOLVENT FRACTIONATION PROCESS. Athanasiadis, De Smet, Helme, Klein, and Bernard Lesieur, Lesieur
- 11:20 20. REFINABILITY OF NEW RAPESEED OILS. Maurice Naudet, Elie Sambuc and Guy Devinat, Universite d'Aix-Marseille
- 11:40 21. NEW PROCESS IN WINTERIZING, DEGUMMING-BLEACHING AND DEACIDIFICATION-DEODORIZATION OF EDIBLE OILS. H.L.S. Staff, H.L.S. Ltd., Israel

10:00 a.m.—Wildcatter Room

SESSION 5—General: Oilseeds

Chairman: J.P. Cherry, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 22. VARIATION OF THE IODINE VALUE AND LINOLENIC ACID CONTENT OF CANOLA RAPESEED GROWN IN WESTERN CANADA. James K. Daun, Canadian Grain Commission
- 10:20 23. SULFUR CONTENT OF CANOLA OIL. James K. Daun, Canadian Grain Commission
- 10:40 24. VARIABILITY IN OIL CONTENTS, POLYUNSATURATED FATTY ACIDS, AND VITAMIN E ISOMERS AMONG CORN INBREDS. E.J. Weber, NCR-USDA, E.A. Yen, L. Galliher and D.E. Alexander, University of Illinois
- 11:00 25. CHEMICAL, NUTRITIONAL AND TOXICOLOGICAL EVALUATION OF UNCONVENTIONAL OILS—MESTA SEED OIL. C. Rukmini and Malini Vijay Araghavan, National Institute of Nutrition, India
- 11:20 26. RUBBER SEED OIL: THE UNTAPPED POTENTIAL SOURCE IN KARNATAKA (INDIA). V. Jayappa, P.K. Shanbhag, K.B. Patil and Shrinivas Amminalli, Karnataka Soaps and Detergents Limited, India
- 11:40 27. LIPID COMPOSITION OF THE MANGO (*Mangifera indica*), KERNAL FAT. J. Hemavathi, J.V. Prabhakar and D.P. Sen, Central Food Technological Research Institute, India

10:00 a.m.—Bayou II

SESSION 6—General: Analytical I

Chairman: L.L. Muller, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 28. CHROMATOGRAPHIC BEHAVIOR OF A HOMOLOGOUS SERIES OF OCTADECENOATES AND THE CORRESPONDING GEOMETRICAL AND POSITIONAL OCTADECENOATE ISOMERS. Moghis U. Ahmad, Theresa Lee and Randall Wood, Texas A & M University
- 10:20 29. DOUBLE BOND ANALYSES OF DIENOIC FATTY ACIDS IN MIXTURES: COMPARISON OF STRATEGIES FOR SOLUTION OF LINEAR SIMULTANEOUS EQUATIONS. A.C. Beckwith, R.O. Butterfield and H.J. Dutton, Northern Regional Research Center, USDA
- 10:40 30. OPTIMIZATION OF PARAMETERS FOR THE ANALYSIS OF TRIGLYCERIDES BY REVERSE PHASE HPLC USING A UV DETECTOR AT 210 NM. J.A. Singleton and H.E. Pattee, North Carolina State University
- 11:00 31. ANALYSIS OF LIPID CLASSES AND LIPOFUSCIN SUBSTANCES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. F.C. Phillips and O.S. Privett, The Hormel Institute
- 11:20 32. HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF CHOLESTEROL OXIDES. Alan J. Sheppard and Chih-shang J. Sen, Food and Drug Administration
- 11:40 33. EXTRACTION OF ASCORBYL PALMITATE

FROM WHEAT FLOUR AND ANALYSIS BY HIGH PRESSURE LIQUID CHROMATOGRAPHY. Sharon L. Melton, Judy Harrison and Donna Churchville, University of Tennessee

1:55 p.m.—Gold Room

SESSION 7—Symposium: Phytic Acid

Chairman: A.G. Pierce, Jr., Southern Regional Research Center, USDA, New Orleans, LA

- 1:55 INTRODUCTORY REMARKS.
- 2:00 34. CHEMICAL AND BIOLOGICAL STUDIES OF PHYTATE-MINERAL INTERACTIONS. K.T. Smith and John T. Rotruck, The Procter & Gamble Company
- 2:45 35. BIOAVAILABILITY OF CERTAIN MINERALS IN PHYTATE-CONTAINING FOODS. G.S. Ranhotra and J.A. Gelroth, American Institute of Baking, and G.L. Winterringer, Kansas State University
- 3:15 BREAK
- 3:30 36. STUDIES OF PHYTATE/ZINC MOLAR RATIO AND BIOAVAILABILITY OF DIETARY ZINC. Eugene R. Morris and Rex Ellis, Beltsville Human Nutrition Research Center, USDA
- 4:00 37. THE UTILIZATION OF PHYTATE PHOSPHORUS BY POULTRY. Talmadge S. Nelson, Linda K. Kirby and Gordon C. Ballam, University of Arkansas
- 4:30 38. FATE OF PHYTATE IN BREADMAKING USING WHOLE WHEAT FLOUR. U. Tangkongchit, P.A. Seib and R.C. Hosney, Kansas State University

1:30 p.m.—University Room

SESSION 8—Walter A. Pons, Jr., Memorial Symposium: Mycotoxins I

Chairman: L.A. Goldblatt, Southern Regional Research Center, USDA, New Orleans, LA

- 1:30 INTRODUCTORY REMARKS.
- 1:35 39. CONTRIBUTIONS OF WALTER A. PONS, JR., TO DEVELOPMENT OF METHODOLOGY FOR MYCOTOXINS. L.S. Lee and L.A. Goldblatt, Southern Regional Research Center, USDA
- 1:55 40. MINICOLUMN CHROMATOGRAPHY: THE STATE OF THE ART. Charles E. Holaday, National Peanut Research Lab
- 2:20 41. A RAPID METHOD FOR DETERMINATION OF AFLATOXINS IN COTTONSEED AND MEAL. John D. McKinney, Ranchers Cotton Oil
- 2:40 42. CONFIRMATION OF AFLATOXINS AT THE FIELD LEVEL. James Velasco, USDA, Beltsville
- 2:50 43. A SUBSTITUTE FOR BENZENE IN AFLATOXIN STANDARD SOLUTIONS. James Velasco, USDA, Beltsville
- 3:00 BREAK
- 3:15 44. ENZYME-LINKED IMMUNOSORBENT ASSAY FOR T-2 TOXIN. J.J. Pestka, S.S. Lee, H.P. Lau and F.S. Chu, University of Wisconsin
- 3:45 45. REVERSED-PHASE, HIGH-PERFORMANCE LIQUID CHROMATOGRAPHIC SEPARATION OF XANTHOMEGNIN, VIOMELLEIN, AND RUBROSULFIN. J.H. Wall and E.B. Lillehoj, Southern Regional Research Center, USDA
- 4:00 46. CONFIRMATION OF IDENTITY OF AFLATOXINS. Stanley Nesheim and William C. Brumley, Food and Drug Administration
- 4:30 47. PONS COLUMN ADAPTED FOR USE IN SOLVENT-SAVING MODIFICATION OF THE CB PROCEDURE FOR AFLATOXIN. L.S. Lee and E.L. Catalano, Southern Regional Research Center, USDA

1:30 p.m.—Creole Room

SESSION 9—Symposium: Flavor Technology of Foods II

Chairmen: David B. Min (presiding), Department of Food Science and Nutrition, Ohio State University, Columbus, OH, and A.J. St. Angelo, Southern Regional Research

Center, USDA, New Orleans, LA

- 1:30 48. THE EFFECTS OF DIFFERENT ANTIOXIDANTS ON THE FLAVOR QUALITY OF SOYBEAN OIL DURING STORAGE. J. Wen and David B. Min, Ohio State University
- 1:55 49. THE KINETIC STUDIES OF DISSOLVED OXYGEN DEPLETION AND FORMATION OF VOLATILE FLAVOR COMPOUNDS IN OIL. J. Wen, D.Q. Schweizer and David B. Min, Ohio State University
- 2:20 50. IMPROVED METHOD FOR THE FLAVOR EVALUATION OF FATS AND OILS. Rebecca Stone and Earl G. Hammond, Iowa State University
- 2:40 51. THE EFFECTS OF SELECTED FACTORS ON THE OXIDATION OF POTATO CHIPS. D.Q. Schweizer, J. Wen and David B. Min, Ohio State University
HONORED STUDENT PRESENTATION
- 3:05 BREAK
- 3:15 52. STUDIES ON POTATO CHIP FLAVOR STABILITY. Jiunn-Yann Tang, Michael Ma, Jeanne Street, Lynn Warren, Otto E. Schroeder and Alan Wohlman, Frito-Lay
- 3:40 53. METHODOLOGY FOR HEADSPACE GC PROFILING OF CEREAL PRODUCTS FOR CORRELATION WITH OLFACTORY EVALUATION. E.L. Anderson, T.E. Geselle, M.P. Bussey, J.G. Michael and J.F. Yamashita, Kellogg Company
- 4:05 54. SENSORY ANALYSIS OF FOOD PRODUCTS CONTAINING WHITE-SKINNED PEANUT FLOURS. Carolyn H. Vinnett, R.L. Ory and A.J. St. Angelo, Southern Regional Research Center, USDA
- 4:30 55. RELATIONSHIPS OF FLAVOR AND GAS CHROMATOGRAPHIC VOLATILE ANALYSIS IN SOYBEAN OIL AND PROTEIN PRODUCTS. K.A. Warner, Northern Regional Research Center, USDA

2:00 p.m.—Explorer's Room

SESSION 10—Symposium: Surfactants in Textiles I

Chairman: M.J. Schick, Diamond Shamrock Corporation, Morristown, NJ

- 2:00 56. NEW DEVELOPMENTS IN DETERGENCY THEORY. A.M. Schwartz, Consultant, Rockville, MD
- 2:30 57. EVALUATION OF DETERGENCY. E. Kissa, E.I. DuPont de Nemours & Co.
- 3:00 58. KINETICS OF DETERGENCY. I. Weil and E. Vikara, Lever Brothers Company
- 3:30 59. EFFECTS OF ADSORPTION ON DETERGENCY PHENOMENA—PART I. M.J. Schwuger, Henkel KGaA, West Germany
- 4:00 60. EFFECTS OF ADSORPTION ON DETERGENCY PHENOMENA—PART II. M.J. Schwuger, Henkel KGaA, West Germany
- 4:30 61. ADSORPTION STUDY OF NONIONIC SURFACTANTS ON POLYESTER FIBER. M.L. Gum and E.D. Goddard, Union Carbide Corporation

1:30 p.m.—Bayou I

SESSION 11—Symposium: Energy Conservation

Chairman: Arnold M. Gavin, EMI Corporation, Des Plaines, IL

- 1:30 62. ACTIVITIES OF D.O.E. IN THE FOOD SEGMENT. Larry Kelso, U.S. Department of Energy
- 1:50 63. SOLAR THERMAL SYSTEMS IN INDUSTRY. D.J. Allen and A.C. Gangadharan, Foster Wheeler Solar Development Corp.
- 2:10 64. THE PRACTICAL ECONOMICS OF SOLID FUEL FIRED PROCESS STEAM GENERATION. Michael R. Walker, Energy Systems, Inc.
- 2:30 65. UPDATE ON OPERATIONS OF TWO-STAGE COAL GASIFIER AT THE UNIVERSITY OF MINNESOTA IN DULUTH. D.F. Bress, Foster Wheeler S.P.E.C., and R.J. Broeker, Foster Wheeler Energy Corporation
- 2:50 66. CURRENT ENERGY CONSIDERATIONS FOR HYDROGEN GENERATION BY THE ELECTRO-

LYTIC PROCESS. C.C.M. Baker, The Electrolyser Corporation, Ltd.

- 3:10 67. ENERGY CONSERVATION IN FATTY ACID CHEMICALS. Roger Daniels, Union Camp Corporation
- 3:30 68. THE EFFECT OF SOLVENT EXTRACTION VARIABLES ON ENERGY USAGE. George E. Anderson, Crown Iron Works Company
- 3:50 69. SOME THOUGHTS ON SOYBEAN PROCESSING. Norm H. Witte, Central Soya Company, Inc.
- 4:10 70. ENERGY CONSERVATION IN EDIBLE OIL PROCESSING. David C. Tandy and Larry W. Gavin, EMI Corporation
- 4:30 71. ENERGY CONSERVATION FOR AN OILSEEDS COMPLEX. Kenneth W. Becker, Davy McKee Corporation

2:00 p.m.—Wildcatter Room

SESSION 12—Symposium: Sterols I: Biosynthesis

Chairman: H.W. Kircher, University of Arizona, Tucson

- 2:00 72. TOTAL ENZYMIC SYNTHESIS OF CHOLESTEROL FROM LANOSTEROL. James L. Gaylor, E.I. DuPont de Nemours & Co., Gary J. Fisher, Washington University, St. Louis, Wayne D. Bowen, National Institute of Mental Health, Greg Grinstead, Young-Ki Paik and James M. Trzaskos, University of Missouri
- 2:30 73. BIOSYNTHESIS OF 1-OCTANOL FROM OCTANE. STEREOCHEMISTRY OF THE ENZYMIC OXYGENATION. Eliahu Caspi, James U. Piper and Stuart Shapiro, Worcester Foundation for Experimental Biology
- 3:00 74. MARINE SHORT SIDE CHAIN STEROLS: FACTS AND HYPOTHESES CONCERNING THE MECHANISM OF CARBON ATOM ELIMINATION AND THEIR POSSIBLE ORIGINS. J.L. Boutry and M. Barbier, Institute de Chimie des Substances Naturelles, Gif, France
- 3:30 75. THE PARTICIPATION OF STEROL CARRIER PROTEIN₂ (SCP₂) IN CHOLESTEROL BIOSYNTHESIS, UTILIZATION AND INTRACELLULAR TRANSFER. Terence J. Scallen, Billie J. Noland and Kathleen L. Gavey, University of New Mexico
- 4:00 76. THE REGULATION OF TETRAHYMANOL BIOSYNTHESIS IN *Tetrahymena pyriformis*. Colin F. Warburg and David C. Wilton, University of Southampton, England
- 4:30 77. THE USE OF SPECIFICALLY DESIGNED INHIBITORS TO STUDY THE REGULATION OF HIGHER PLANT STEROL BIOSYNTHESIS. Pierre Benveniste, Institut de Botanique, Strasbourg, France

2:00 p.m.—Bayou II

SESSION 13—General: Analytical II

Chairman: L.L. Muller, Southern Regional Research Center, USDA, New Orleans, LA

- 2:00 78. CHEMICAL IONIZATION-MASS SPECTROMETRY OF FATTY ACIDS: THE EFFECT OF FUNCTIONAL GROUPS ON THE CI SPECTRA. Ronald D. Plattner, Northern Regional Research Center, USDA
- 2:20 79. SEPARATION OF GLASS PAIRS OF C-24 EPIMERIC STEROLS BY GLASS CAPILLARY GAS CHROMATOGRAPHY. Raymond H. Thompson, Nutrient Composition Laboratory, USDA, Glenn Patterson, University of Maryland, Malcolm J. Thompson, Insect Physiology Laboratory, USDA, and Hal T. Slover, Nutrient Composition Laboratory, USDA
- 2:40 80. A MICRO-QUANTITATIVE PROCEDURE FOR THE ESTIMATION OF FREE FATTY ACIDS AND THE LIPASE ACTIVITY IN CEREAL GRAIN. M.R. Sahasrabudhe, Agriculture Canada
- 3:00 81. COMPARISON OF THREE METHODS OF DETERMINING OIL CONTENT OF SUNFLOWER SEED. James A. Robertson, R.B. Russell Research Center, USDA
- 3:20 82. SPECTROPHOTOMETRIC ASSAYS OF PALM OIL

QUALITY. P.A.T. Swoboda, Palm Oil Research Institute of Malaysia

- 3:40 83. DETERMINATION OF TRACE METALS IN ORGANICS BY AUTOMATED FURNACE ATOMIC ABSORPTION SPECTROSCOPY. Herbert Kahn, John Sotera and Timothy Corum, Instrumentation Laboratory, Inc.
- 4:00 84. WET DIGESTION VERSUS SIMPLER METHODS FOR DETERMINATION OF HEAVY METALS IN FISH OILS. R.G. Ackman, Technical University of Nova Scotia, and C.M. Elson, St. Mary's University

Sanders, R.A. Hill, R.J. Cole and P.D. Blankenship, National Peanut Research Laboratory, USDA

- 11:05 97. VARIABILITY IN CORN HYBRID RESISTANCE TO PREHARVEST AFLATOXIN CONTAMINATION. E.B. Lillehoj, Southern Regional Research Center, USDA and M.S. Zuber, University of Missouri
- 11:25 98. RELATIONSHIP BETWEEN BRIGHT GREENISH-YELLOW FLUORESCENCE AND AFLATOXIN CONTAMINATION IN YELLOW CORN MARKETING IN NORTH CAROLINA. J.W. Dickens and T.B. Whitaker, USDA
- 11:45 99. A STUDY OF VARIETAL AND ENVIRONMENTAL FACTORS IN RELATION TO PREHARVEST AFLATOXIN CONTAMINATION OF CORN GROWN IN THE SOUTHEASTERN UNITED STATES. Leonard Stoloff, U.S. Food and Drug Administration, Eivend B. Lillehoj, Southern Regional Research Center, USDA, and Marcus A. Zuber, University of Missouri

Tuesday, May 19

9:00 a.m.—Gold Room

SESSION 14—Symposium: Protein and Nutrition

Chairmen: George Liepa, Texas Woman's University, Denton, TX, and R. Dixon Phillips, University of Georgia, Experiment, GA

- 9:00 85. CHOLESTEROL DISPOSITION IN SWINE FED VARIOUS PROTEINS AND FATS. K.D. Wiggers, L.S. Walsh, Iowa State University, A.D. Julius, Eppley Institute of Cancer Research, M.J. Richard, C.E. Glatz and M.A. Hauser, Iowa State University
- 9:20 86. EFFECTS OF ANIMAL AND VEGETABLE PROTEIN ON SERUM LIPIDS IN ELDERLY WOMEN. George U. Liepa and Sarah Kelleher, Texas Woman's University
- 9:40 87. ROLE OF OILSEED PROTEINS IN LIPOPROTEIN METABOLISM. George U. Liepa and Myung Park, Texas Woman's University
- 10:00 88. UTILIZATION OF WHEAT AND GARBANZO BEAN PROTEIN IN RATS AS EVALUATED BY RESPONSE SURFACE METHODOLOGY. Nancy L. Canolty, University of Georgia
- 10:20 89. NUTRITIONAL VALUE OF COTTONSEED PROTEIN IN THE HUMAN DIET: AN OVERVIEW. Alice N. Milner and Betty B. Alford, Texas Woman's University
- 10:40 90. FOOD ENERGY—A REEVALUATION OF THE FACTORS USED FOR ITS CALCULATION. John L. Wehrauch, CNC, and Young-sun Son, University of Maryland
- 11:00 91. THE FATTY ACID CONTENT IN THE FOOD SUPPLY OF SELECTED COUNTRIES WITH DIFFERENT DIETS. John L. Wehrauch, CNC, Wanda Polacchi, FAO, and J. Perisse, FAO, Food Policy and Nutrition Division

9:00 a.m.—University Room

SESSION 15—Walter A. Pons, Jr., Memorial Symposium: Mycotoxins II

Chairman: L.A. Goldblatt, Southern Regional Research Center, USDA, New Orleans, LA

- 9:00 INTRODUCTORY REMARKS.
- 9:05 92. AFLATOXIN BIOSYNTHESIS: HOW IS IT REGULATED? J.W. Bennett, Tulane University
- 9:40 93. AFLATOXIN BIOSYNTHETIC PATHWAY: PREPARATION OF [¹⁴C]-LABELED AFLATOXIN B₁, B₂, G₁, AND G₂. John C. Floyd and J.W. Bennett, Tulane University, and L.S. Lee, Southern Regional Research Center, USDA
- 9:55 94. EFFECT OF β-IONONE ON *Aspergillus parasiticus* GROWTH, SPORULATION, MORPHOLOGY AND AFLATOXIN PRODUCTION. D.M. Wilson, University of Georgia, R.C. Guedner, SGIRL, USDA, J.K. McKinney, R.H. Lievsay, B.D. Evans and R.A. Hill, University of Georgia
- 10:10 95. REDUCING AFLATOXIN CONTAMINATION IN PEANUT GENOTYPES BY SELECTION AND BREEDING. A.C. Mixon, Coastal Plain Station, USDA
- 10:30 BREAK
- 10:45 96. EFFECT OF DROUGHT ON OCCURRENCE OF *Aspergillus flavus* IN MATURING PEANUTS. T.H.

9:00 a.m.—Creole Room

SESSION 16—Symposium: Lipid Oxidation I

Chairman: E.N. Frankel, Northern Regional Research Center, USDA, Peoria, IL

- 9:00 100. MECHANISMS OF THE INITIATION OF THE AUTOXIDATION OF SIMPLE ALKENES AND POLYUNSATURATED FATTY ACIDS (PUFA) BY NITROGEN DIOXIDE AND OZONE. William A. Pryor, John W. Lightsey, Donald G. Prier and Daniel F. Church, Louisiana State University
- 9:30 101. KINETICS AND ENERGETICS OF AUTOXIDATION OF LIPIDS. Michael G. Simic, National Bureau of Standards
- 10:00 102. THE FREE RADICAL OXIDATION OF ARACHIDONIC ACID. Ned A. Porter, Karl J. Smith and Laura S. Lehman, Duke University
- 10:30 103. STRUCTURE AND STEREOCHEMISTRY OF NOVEL ENDOPEROXIDES ISOLATED FROM THE SENSITIZED PHOTOOXIDATION OF METHYL LINOLEATE. E.D. Mihelich, The Procter & Gamble Company
- 11:00 104. SECONDARY OXIDATION PRODUCTS OF AUTOXIDIZED METHYL LINOLENATE AND PHOTSENSITIZED OXIDIZED METHYL LINOLEATE. HYDROPEROXYCYCLIC PEROXIDES AND DIHYDROPEROXIDES. W.E. Neff, E.N. Frankel and D. Weisleder, Northern Regional Research Center, USDA
- 11:30 105. ISOLATION AND CHARACTERIZATION OF BICYCLOENDOPEROXIDES DERIVED FROM METHYL LINOLENATE. David E. O'Connor, Edward D. Mihelich and Milton C. Coleman, The Procter & Gamble Company

9:00 a.m.—Explorer's Room

SESSION 17—Symposium: Surfactants in Textiles II

Chairmen: G.C. Tesoro (presiding), Massachusetts Institute of Technology, Cambridge, MA, and M.J. Schick, Diamond Shamrock Corporation, Morristown, NJ

- 9:00 106. WETTING PROPERTIES OF NONIONIC SURFACTANTS OF HOMOGENEOUS STRUCTURE, C₁₂H₂₅ (OC₂H₄) X OH. A.W. Cohen and M.J. Rosen, Brooklyn College of the City University of New York
- 9:30 107. EXAMINATION OF PARAMETERS GOVERNING INTERFACIAL TENSION IN DETERGENCY. K.W. Dillan and G.C. Johnson, Union Carbide Corporation
- 10:00 108. SURVEY OF PHYSICAL AND ANALYTICAL TECHNIQUES USEFUL IN DETERGENCY. R. Llenado, Procter & Gamble Company
- 10:30 109. PERFORMANCE OF NONIONIC/ZEOLITE/SILICATE COMPOSITE. L. Kravetz, Shell Development Company
- 11:00 110. TYPE A ZEOLITE AS A DETERGENT BUILDER. M.E. Tuvell, J.H. Miller and P.C. Hu, Ethyl Corporation

- 11:30 111. NEW CARBOXYLATED SURFACTANTS—AN APPROACH TO FORMULATION. K. Schoene, M. Esposito, M. Naima and H. Wolf, Sandoz Co.

9:00 a.m.—Bayou I

SESSION 18—Evald L. Skau Memorial Symposium: A. Industrial Uses and Applications of Fats and Oils I

Chairman: G. Maerker, Eastern Regional Research Center, USDA, Philadelphia, PA

- 9:00 112. EVALD LAURIDS SKAU: OUTSTANDING IN COMPETENCE, COURAGE, AND CONCERN. C.H. Fisher
- 9:15 113. EVALD LAURIDS SKAU: ENTHUSIASTIC, DEDICATED, AND SUPERB RESEARCHER. G. Sumrell, Southern Regional Research Center, USDA
- 9:30 114. FATTY CHEMICAL ECONOMICS FOR THE 1980s. E.C. Leonard, Humko Chemical
- 9:50 115. REACTION OF ACTIVE OXYGEN SPECIES WITH METHYL OLEATE AND ALKYL HALIDES. T.A. Foglia, P.A. Colfer and Y. Nakano, Eastern Regional Research Center, USDA
- 10:10 116. HYDROSILYLATION OF METHYL OLEATE. W.R. Miller, E.H. Pryde and E.N. Frankel, Northern Regional Research Center, USDA
- 10:30 117. METHANESULFONIC ACID CATALYZED ADDITION OF AROMATIC COMPOUNDS TO OLEIC ACID. Y. Nakano and T.A. Foglia, Eastern Regional Research Center, USDA
- 10:50 118. SYNTHESIS AND PROPERTIES OF FATTY IMIDAZOLINES AND THEIR N-(AMINOETHYL) DERIVATIVES. R.G. Bistline, Jr., J.W. Hampson and W.M. Linfield, Eastern Regional Research Center, USDA
- 11:10 119. FACILE DEHYDROHALOGENATION OF VIC-DIBROMO FATTY ACIDS: PREPARATION OF STEARIC ACID AND RELATED ACIDS. L.S. Silbert, Eastern Regional Research Center, USDA
- 11:30 120. PRODUCTION OF BRANCHED CHAIN FATTY ACIDS FROM STERCULIA OIL. Yoshinori Kai, Nissinn Oil Mills, Ltd., and Everett H. Pryde, Northern Regional Research Center, USDA

9:00 a.m.—Wildcatter Room

SESSION 19—Symposium: Sterols II: Sterols in Plants and Insects

Chairmen: W.R. Nes (presiding), Drexel University, Philadelphia, PA, and H.W. Kircher, University of Arizona, Tucson

- 9:00 121. PRODUCTION OF Δ^{23} -, $\Delta^{24(28)}$ - AND Δ^{25} -STEROL INTERMEDIATES BY *Zea mays*. L. John Goad, Neil Misso and Marie Zakelj, University of Liverpool, England
- 9:30 122. STEREOCHEMISTRY OF THE 24-ALKYL GROUP OF STEROLS IN PRIMITIVE PLANTS. Pei-Lu Chin and Glenn W. Patterson, University of Maryland
- 10:00 123. THE QUANTITATIVE ANALYSIS OF PLANT STEROLS. B.A. Knights, The University of Glasgow, Scotland
- 10:30 124. THE UTILIZATION AND METABOLISM OF DIETARY STEROLS IN THE HONEY BEE AND THE YELLOW FEVER MOSQUITO. J.A. Svoboda, M.J. Thompson and E.W. Herbert, Jr., USDA Insect Physiology Lab, Beltsville, MD
- 11:00 125. THE METABOLISM OF PHYTOSTEROLS IN *Tenebrio molitor*. F. Nicotra, F. Ronchetti, G. Russo and L. Toma, University of Milan, Italy
- 11:30 126. RESPONSE OF *Drosophila* SPECIES TO DIETARY *CIS-TRANS-22-DEHYDROCHOLESTEROL*. Henry W. Kircher, James Fogleman, Rebecca Phariss, David Baldwin and Fuwiko U. Rosenstein, University of Arizona
- 12:00 127. ECDYSONE IN THE BLOWFLY: TRANSPORT AND METABOLISM. Jan Koolman and Peter Karlson, Phillips-Universität, W. Germany

9:00 a.m.—Bayou II

SESSION 20—General: Fatty Acid Metabolism I

Chairman: Jean-Paul Helme, Lesieur-Cotelle et Associes, Boulogne Billancourt, France

- 9:00 128. DIETARY MODIFICATION OF LINOLEIC ACID:ARACHIDONIC ACID RATIOS IN MICE. Luke A. Pallansch, Joseph Sampugna and Mark Keeney, University of Maryland
- 9:20 129. POSITIONAL SPECIFICITY OF *TRANS* FATTY ACIDS IN FETAL LECITHINS. Carolyn E. Moore, University of Texas at Houston and Govind A. Dhopeswarkar, University of California at Los Angeles
- 9:40 130. FATE OF DIETARY *CIS*- AND *TRANS*-13-OCTADECENOIC ACIDS IN HUMAN PLASMA. E.A. Emken, R.O. Aldof, W.K. Rohwedder, Northern Regional Research Center, USDA, and R.M. Gulley, St. Francis Hospital-Medical Center
- 10:00 131. THE EFFECT OF DIETARY *TRANS* FATTY ACIDS ON RAT LIVER MICROSOMAL 6- AND 9-ACYL DESATURASE ACTIVITIES. Remi De Schrijver and Orville S. Privett, The Hormel Institute
- 10:20 132. A NEW APPROACH TO EVALUATION OF METABOLIC INTERACTIONS OF PUFA APPLIED TO EFFECTS DUE TO DIETARY *TRANS* FATTY ACIDS. Eldon G. Hill, Susan Johnson and Ralph T. Holman, The Hormel Institute
- 10:40 133. PROFILES OF POLYUNSATURATED FATTY ACIDS IN HUMAN DISEASE. Ralph T. Holman and Susan Johnson, The Hormel Institute
- 11:00 134. EFFECT OF HEPATOMA ON HOST LIVER, HEART AND LUNG LIPIDS AS TUMOR GROWTH PROGRESSES. Randall Wood, Andrew Zoeller and Martha Matocha, Texas A&M University
- 11:20 135. LIPID METABOLISM IN RAT TESTICULAR SERTOLI AND GERMINAL CELLS. John G. Coniglio, Vanderbilt University
- 11:40 136. MODIFICATION OF FUNGAL LIPIDS DURING AGING AND TREATMENT WITH α -TOCOPHEROL. Satruken Ramsammy and R. Cecil Jack, St. John's University

1:30 p.m.—Gold Room

SESSION 21—Symposium: Cottonseed Oil Mill Dust
Chairman: R.M. Bethea, Texas Tech University, Lubbock, TX

- 1:30 137. COTTON DUST STANDARDS FOR THE RAW COTTON INDUSTRIES. Phillip J. Wakelyn, National Cotton Council
- 1:55 138. EVALUATION OF OCCUPATIONAL COTTON DUST CONTROL TECHNOLOGY IN COTTONSEED OIL MILLS. R.M. Bethea, C.L. Burford, J. Jacobi and J.C. Kao, Texas Tech University
- 2:20 139. ECONOMICS OF OCCUPATIONAL COTTON DUST CONTROL IN COTTONSEED OIL MILLS. C.L. Burford, R.M. Bethea, J. Jacobi and J.C. Kao, Texas Tech University
- 2:45 140. THE ROLE OF THE DUST CONTROL CONTRACTOR IN REDUCING EMISSIONS FROM THE EQUIPMENT IN COTTONSEED OIL MILL HULLING AND SEPARATING ROOMS. Walter Godchaux, Jr., Nadustco, Inc.
- 3:15 141. STATUS OF EFFORTS BY OIL MILL MACHINERY MANUFACTURERS TO CONTROL FUGITIVE DUST EMISSIONS. Barry Sanders, W.C. Cantrell Company
- 3:35 BREAK
- 3:50 142. SAMPLING FOR RESPIRABLE COTTON DUST. K.Q. Robert, Jr., and Albert Baril, Jr., Southern Regional Research Center, USDA
- 4:15 143. COTTON DUST PARTICLE SIZE DISTRIBUTIONS IN OIL MILLS. Devron P. Thibodeaux, Southern Regional Research Center, USDA
- 4:40 144. BOTANICAL TRASH ANALYSIS OF COTTONSEED PROCESS STREAMS. P.R. Morey and R.M. Bethea, Texas Tech University
- 5:05 145. IDENTIFICATION AND ELIMINATION OF THE

1:30 p.m.—University Room

SESSION 22—Walter A. Pons, Jr., Memorial Symposium: Mycotoxins III

Chairmen: S.A. Koltun (presiding) and L.A. Goldblatt, Southern Regional Research Center, USDA, New Orleans, LA

- 1:30 INTRODUCTORY REMARKS.
- 1:35 146. AFLATOXIN IN FRESHLY HARVESTED 1979 GEORGIA CORN AND FORMATION AFTER COLLECTION. O.L. Shotwell, W.F. Kwolek and C.W. Hesseltine, Northern Regional Research Center, USDA
- 1:55 147. YIELD EFFECTS ON TOLERANCE TO IN VITRO ACCUMULATION OF AFLATOXINS IN PECAN MEAL. J.L. McMeans, Southeastern Fruit and Tree Nut Research Laboratory, USDA
- 2:15 148. AFLATOXIN FORMATION ON WHOLE AND GROUND CUMIN AND ANISE SEEDS. Gerald C. Llewellyn, Elixia C. Dixon and Thomas Eadie, Virginia Commonwealth University, William V. Dashek, West Virginia University, and Charles E. O'Rear, George Washington University
- 2:35 BREAK
- 2:50 149. ZEARELENONE FORMATION ON CORN BY FIELD INOCULATION. Genevieve Garcia Aguirre, Universidad Nacional Autonoma de Mexico, Donald G. White, University of Illinois, and Odette L. Shotwell, Northern Regional Research Center, USDA
- 3:20 150. NATIONAL SURVEY OF MYCOTOXIN PROBLEMS IN CANADA. R.I. Andrews, Deloitte Haskins & Sells Associates, and H.L. Trenholm, Agriculture Canada
- 3:40 151. 1980 SURVEY OF MYCOTOXINS IN ONTARIO AND QUEBEC. H.L. Trenholm, J.I. Elliot, E.R. Farnworth, D.W. Friend, R.M.G. Hamilton, J.F. Standish, W.P. Cochrane, H. Cohen and G.A. Neish, Agriculture Canada
- 4:00 152. EVALUATION OF THE MONOMETHYLAMINE: CA(OH)₂ METHOD FOR THE DECONTAMINATION OF AFLATOXIN-CONTAMINATED PEANUT MEAL. Douglas L. Park, Food and Drug Administration, Mongi Jemmali, Institut National de la Recherche Agronomique, Charles Frayssinet and Christiane LaFarge-Frayssinet, Institut de Recherches Scientifiques sur le Cancer, and Mireille Yvon, Institut National de la Recherche Agronomique

2:00 p.m.—Creole Room

SESSION 23—Symposium: Lipid Oxidation II

Chairman: E.N. Frankel, Northern Regional Research Center, USDA, Peoria, IL

- 2:00 153. THE ROLE OF SINGLET OXYGEN IN BIOLOGICAL OXIDATIONS. Michael J. Thomas, Lawrence R. DeChatelet, Bowman Gray School of Medicine, and William A. Pryor, Louisiana State University
- 2:30 154. A CYTOSOLIC FACTOR WHICH CONTROLS LIPID PEROXIDATION IN BIOLOGICAL MEMBRANES. Paul B. McCay and Donald D. Gibson, Oklahoma Medical Research Foundation, and Roger K. Hornbrook, University of Oklahoma Health Sciences Center
- 3:00 155. PHOTOOXIDATION OF POLYUNSATURATED LIPIDS INVESTIGATED WITH A GAS CHROMATOGRAPHIC REACTOR. J. Assis F. Faria, UFV-Brazil, and Seymour G. Gilbert, Rutgers University
- 3:30 156. AUTOXIDATION PRODUCTS IN PHOSPHATIDYLCHOLINE LIPOSOMES AND IN MYOPLASMA MEMBRANES. Guey-Shuang Wu, Eric Sohlberg, Robert A. Stein, James F. Mead, UCLA, and Ronald N. McElhaney, University of Alberta
- 4:00 157. EFFECT OF RANDOMIZATION ON THE OXIDATION PRODUCTS OF CORN OIL. Flora Lau and

2:00 p.m.—Explorer's Room

SESSION 24—Symposium: Surfactant Analyses

Chairperson: Katherine Guin, (presiding) Shell Chemical Co., Houston, TX, and T.P. Matson, Conoco, Ponca City, OK

- 2:00 158. AN IMPROVED HPLC METHOD FOR THE DETERMINATION OF ETHYLENE OXIDE DISTRIBUTIONS IN NONIONIC SURFACTANTS. M.C. Allen and D.E. Linder, Conoco Inc.
- 2:25 159. DETERMINATION OF WATER HARDNESS RESIDUES ON CLOTHS AFTER TERG-O-TOMETER TESTING. Karl Van Dyke, Amway
- 2:50 160. GEL PERMEATION CHROMATOGRAPHY OF POLYETHYLENE SURFACTANTS. S.J. Brauer and T.M. Schmitt, BASF Wyandotte Corporation
- 3:15 161. DETERMINATION OF ETHYLENE OXIDE DISTRIBUTIONS IN ALCOHOL ETHOXYLATES BY HPLC USING A ROTATING DISC-FLAME IONIZATION DETECTOR. J.D. McClure, Shell
- 3:40 162. NO TITLE AVAILABLE. Carey Bottoms, Drackett
- 4:05 163. THE SYNTHESIS OF DOUBLE-LABELED NON-IONIC SURFACTANTS AND THEIR APPLICATION TO BIODEGRADATION STUDIES. W.T. Shebs and L.S. Smith, Shell
- 4:30 164. NONBIODEGRADABLE NONIONIC DETERGENTS IN MUNICIPAL SEWAGE (IN ISRAEL). Uri Zoller, Haifa University, Oranim, Israel

2:00 p.m.—Bayou I

SESSION 25—Evald L. Skau Memorial Symposium: B. Industrial Uses and Applications of Fats and Oils II

Chairman: G. Maerker, Eastern Regional Research Center, USDA, Philadelphia, PA

- 2:00 165. HPLC OF TRIGLYCERIDES, CONTINUED. L. Witting, R. Eksteen and N. Pelick, Supelco, Inc., and E. Perkins, University of Illinois
- 2:20 166. GLYCEROLYSIS OF FATS AND METHYL ESTERS—STATUS, REVIEW AND CRITIQUE. Norman O.V. Sonntag, Consultant
- 2:40 167. WORLDWIDE PERSPECTIVES ON PROCESSING OF SOYBEAN OIL. T.L. Mounts, K. Warner and G.R. List, Northern Regional Research Center, USDA
- 3:00 168. VEGETABLE OILS AS DIESEL FUEL: PROBLEMS AND POSSIBLE SOLUTIONS. E.H. Pryde and A.W. Schwab, Northern Regional Research Center, USDA
- 3:20 169. SELECTIVE HYDROGENATION OF SOYBEAN OIL: XII. TRIALKYL ALUMINUM-COPPER STEARATE COMPLEX HOMOGENEOUS CATALYSTS. S. Koritala, Northern Regional Research Center, USDA
- 3:40 170. ENZYMATIC FAT SPLITTING. S. Serota, E. Gross and W.M. Linfield, Eastern Regional Research Center, USDA
- 4:00 171. COMPARISON OF VEGETABLE OILS AND METHYL ESTERS OF FATTY ACIDS AS ACCELERATORS FOR DRYING RAISINS. Glenn Fuller, A.E. Stafford, Western Regional Research Center, USDA, and V.E. Petrucci, California State University
- 4:20 172. EMULSIFIED TALLOW AS AN ANTITRANSPIRANT TO REGULATE WATER USE EFFICIENCY OF CROPS. William N. Lipe, Michael D. Gerst and Charles W. Wendt, Texas Agricultural Experiment Station

2:00 p.m.—Wildcatter Room

SESSION 26—Symposium: Sterols III: Steroid Chemistry
Chairmen: L.J. Goad (presiding), University of Liverpool, Liverpool, England, and H.W. Kircher, University of Arizona, Tucson

- 2:00 173. AROMATIC RING C STEROIDS. W. Basil Whalley and Clive L. Yeates, University of London, England

- 2:30 174. 8,14-DIENES IN THE FUNCTIONALIZATION OF THE STEROID NUCLEUS. Mario Anastasia, Pietro Allevi, Alberto Fiecchi and Antonio Scala, University of Milan, Italy
- 3:00 175. STEREOSELECTIVE INTRODUCTION OF HYDROXY GROUP ON THE SIDE CHAIN OF STEROL—SYNTHESIS OF BRASSINOLIDE AND VITAMIN D METABOLITES. Nobuo Ikekawa, Tokyo Institute of Technology, Japan
- 3:30 176. THE PREPARATION OF (20R)-3 β -ACETOXY-22,23-BISNOR-5-CHOLENOL FROM ITS (20S)-EPIMER. Wolfgang Sucrow and Michael Van Nooy, University Paderborn, W. Germany
- 4:00 177. STUDIES ON THE BIOSYNTHESIS OF THE OOGONIOLS. Trevor C. McMorris, University of California at San Diego
- 4:30 178. A ¹H NMR ANOMALY FOR STEROIDAL ALCOHOLS REACTIONS OF A STEROIDAL γ -KETO-ACID. David M. Piatak, Kirk A. Ashline, George Angelos and Rebecca Swenson, Northern Illinois University, and Elisha Caspi, Worcester Foundation for Experimental Biology
- 5:00 179. OZONIZATION OF CHOLESTEROL. Jerzy Guniulka and Leland L. Smith, University of Texas Medical Branch, Galveston

2:00 p.m.—Bayou II

SESSION 27—General: Fatty Acid Metabolism II

Chairman: A. Uzzan, Institut des Corps Gras, Paris, France

- 2:00 180. BIOLOGICAL FILTRATION OF PARTIALLY HYDROGENATED FISH OIL IN A NON-HUMAN PRIMATE SPECIES. R.G. Ackman and J.-L. Sebedio, Technical University of Nova Scotia
- 2:20 181. DIETARY FATTY ACIDS AND THE INCIDENCE OF MYOCARDIAL LESIONS IN THE C3H MOUSE. Ian J. Tinsley, John A. Schmitz, Donald A. Pierce and Eric B. May, Oregon State University
- 2:40 182. ESSENTIAL FATTY ACID DEFICIENCY AS INFLUENCED BY THE TYPE OF DIETARY CARBOHYDRATE. K. Ananth Narayan and John J. McMullen, U.S. Army Natick Research and Development Laboratories
- 3:00 183. CHANGES IN HDL-CHOLESTEROL AND HDL-PHOSPHOLIPIDS DURING PROLONGED ABSOLUTE FASTING. A. Christophe and G. Verdonk, State University, Ghent, Belgium
- 3:20 184. EFFECT OF INTERESTERIFICATION OF OILS AND FATS ON SERUM LIPID CONSTITUENTS OF CHOLESTEROL BILE SALT-STRESSED RATS. Grace George and D.P. Sen, Central Food Technological Research Institute, India
- 3:40 185. EFFECT OF DIETARY LIPID TYPE ON THE COMPOSITION OF PLASMA CHOLESTERYL ESTERS IN THE MALE MONGOLIAN GERBIL AND PLASMA LECITHIN: CHOLESTEROL ACYLTRANSFERASE. Nina J.H. Mercer and Bruce J. Holub, University of Guelph
- 4:00 186. EFFECTS OF METHYLMALONYL CoA ON CHAIN ELONGATION OF γ -LINOLENIC ACID. James J. Peifer and J. Morgan, University of Georgia
- 4:20 187. CHAIN ELONGATION OF POLYUNSATURATED FATTY ACIDS BY BRAIN. IS ACTIVATION WITH COENZYME A ESSENTIAL? Harold W. Cook, Dalhousie University, Halifax, Nova Scotia
- 4:40 188. INHIBITION OF ACYL CoA:CHOLESTEROL ACYLTRANSFERASE (EC 2.3.1.26) BY LOCAL ANESTHETICS IN VARIOUS TISSUES FROM THE RAT. Frank P. Bell, The Upjohn Company

2:00 p.m.—International Ballroom

SESSION 28—Poster Session

189. SIMULTANEOUS QUANTIFICATION OF PROSTAGLANDINS E₂ AND E₃ BY ISOTOPE DILUTION GC-MS. A. Ferretti, N.W. Schoene, V.P. Flanagan and J.M. Roman, USDA, Beltsville, MD
190. THE EFFECT OF THROMBIN ON THE FATE OF ARACHIDONIC ACID IN THE PHOSPHOLIPIDS OF HUMAN PLATELETS. Bruce J. Holub, University of Guelph, and Vincent A. Ziboh, Uni-

versity of Miami School of Medicine

191. MONOGLYCERIDE LIPASE ACTIVITY IN OB₁₇ CELL LINE AS A FUNCTION OF ADIPOCYTE DEVELOPMENT. M.G. Murphy, University Halifax, Canada, R. Negrel and G. Ailhaud, Universite de Nice, France
192. THE INFLUENCE OF AGE ON THE FATTY ACID COMPOSITION AND CONTENT OF LIVER LIPIDS FROM ETHANOL-FED RATS. Steven C. Goheen, Elaine E. Lahue, Edward C. Larkin and G. Ananda Rao, VA Medical Center, CA
193. LIPOLYSIS OF HUMAN MILK FAT BY MILK BILE SALT STIMULATED AND HUMAN LINGUAL LIPASES. Robert G. Jensen, Mark B. Fey and Lisa G. Lambert, University of Connecticut, and Margit Hamosh, Georgetown University
194. TECHNICAL COOPERATION AMONG DEVELOPING COUNTRIES IN THE VEGETABLE OILS AND FATS INDUSTRY. Raja Jaffan, UNIDO

Wednesday, May 20

10:00 a.m.—Gold Room

SESSION 29—Symposium: Plant Proteins I

Chairmen: R. Dixon Phillips, University of Georgia, and E.W. Lusas, Texas A&M University, College Station, TX

- 10:00 195. CHARACTERIZATION OF COMPLEX MIXTURES OF PLANT PROTEINS BY AUTOMATED GEL FILTRATION CHROMATOGRAPHY. Marshall L. Fishman, Eastern Regional Research Center, USDA
- 10:20 196. THE EFFECT OF ANIONIC HYDROCOLLOIDS ON THE SOLUBILITY OF ISOLATED SOYBEAN PROTEINS. Philip A. Jaroslow and Michael V. Taranto, University of Illinois
- 10:40 197. EFFECTS OF CHEMICAL MODIFICATION OF COTTONSEED PROTEINS ON CHEMICAL AND FUNCTIONAL PROPERTIES. Y.R. Choi, E.W. Lusas and K.C. Rhee, Texas A&M University
- 11:00 198. INVESTIGATION OF THE PARAMETERS AFFECTING THE FUNCTIONALITY AND QUALITIES OF SOY PROTEINS IN EXTRACTION PROCESS—II. A.H. Chen, Anderson Clayton Foods, P.M.T. Hansen, Ohio State University and R.A.M. Delaney, Pillsbury, Incorporated
- 11:20 199. FORMULATION OF NONDAIRY COFFEE WHITENERS WITH MODIFIED COTTONSEED PROTEINS. Y.R. Choi, E.W. Lusas and K.C. Rhee, Texas A&M University

10:00 a.m.—University Room

SESSION 30—Walter A. Pons, Jr., Memorial Symposium: Mycotoxins IV

Chairmen: L.S. Lee (presiding) and L.A. Goldblatt, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 200. ISOLATION AND PURIFICATION OF DEOXY-NIVALENOL AND A NEW TRICHOHECENE BY HIGH PRESSURE LIQUID CHROMATOGRAPHY. G.A. Bennett, R.E. Peterson and R.D. Plattner, Northern Regional Research Center, USDA
- 10:25 201. ISOLATION OF ALTENUISOL AND ALTERNATOXINS I AND II, MINOR MYCOTOXINS ELABORATED BY ALTERNARIA. F.S. Chu, University of Wisconsin
- 10:45 202. AFLATOXIN-INDUCED MEMBRANE ALTERATIONS IN SOYBEAN. W.V. Dashek, West Virginia University, G.C. Llewellyn, Virginia Commonwealth University, J.M. Danley, Philadelphia Inst. for Cancer Res., and S.J. Walker, West Virginia University
- 11:05 203. DISTRIBUTION AND METABOLISM OF [³H]-ZEARALENONE IN A LACTATING COW. C.J. Mirocha, University of Minnesota
- 11:35 204. THE DISTRIBUTION OF AFLATOXINS IN CONTAMINATED BEEF LIVER AND OTHER TISSUES. R.D. Stubblefield and O.L. Shotwell, Northern Regional Research Center, USDA

10:00 a.m.—Creole Room

SESSION 31—Symposium: Lipid Oxidation III

Chairman: E.N. Frankel, Northern Regional Research Center, USDA, Peoria, IL

- 10:00 205. THERMAL INTERACTION OF OXIDIZING LINOLEATE WITH THREONINE. A. Witchwood and W.W. Nawar, University of Massachusetts
- 10:30 206. ANALYSIS OF AUTOXIDIZED FATS BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY. VII: VOLATILE THERMAL DECOMPOSITION PRODUCTS OF PURE HYDROPEROXIDES FROM AUTOXIDIZED AND PHOTOSENSITIZED OXIDIZED METHYL OLEATE, LINOLEATE, AND LINOLENATE. E.N. Frankel, W.E. Neff and E. Selke, Northern Regional Research Center, USDA
- 11:00 207. THE QUANTIFICATION OF CARBONYL COMPOUNDS IN OXIDIZED FAT BY GAS CHROMATOGRAPHY OF THE TRICHLOROPHENYL-HYDRAZONES. Pamela J. White and Earl G. Hammond, Iowa State University
- 11:30 208. TWO SIMPLE MICROBIOLOGICAL ASSAYS FOR DAMAGE TO UNSATURATED LIPOPHILIC AGENTS. J.A. Sands, Lehigh University

10:00 a.m.—Explorer's Room

SESSION 32—Symposium: Surfactants, Evaluation, and Surface Chemistry II

Chairman: Ted Matson, Conoco Inc., Ponca City, OK

- 10:00 209. USE PROPERTY ADVANTAGES OF NOVEL PEAKED ETHOXYLATE DISTRIBUTION. K.L. Matheson, Ted P. Matson and Kang Yang, Conoco Inc.
- 10:25 210. THE ROLE OF DETERGENT ENZYMES UNDER CHANGING WASHING CONDITIONS. F.W.J.L. Maase, Gist-Brocades N.V., Delft, The Netherlands
- 10:50 211. DRY FORMS OF α -OLEFIN SULFONATES. Carl P. Cullotta and Andrew Shultz, Stepan Chemical Company
- 11:15 212. A PRACTICAL DISHWASH TEST METHOD FOR SMALL COMPANY USE. Walter Felt, Detergents, Inc.
- 11:40 213. A SHAMPOO TEST FOR MEASURING FOAM IN THE PRESENCE OF SOIL. Nelson F. Borys and Ted P. Matson, Conoco Inc.

10:00 a.m.—Bayou I

SESSION 33—Evald L. Skau Memorial Symposium: C. Analytical Methodology I

Chairmen: R. Bowers, General Mills, Minneapolis, MN, and W.G. Doeden, Swift and Co., Oak Brook, IL

- 10:00 214. INFORMATION THEORY FOR VALIDATION OF CHEMICAL METHODS. William P. Van Antwerp, Bio-Technics Laboratories, Inc.
- 10:20 215. AN IMPROVED NIR METHOD FOR MEASURING OIL, PROTEIN AND MOISTURE IN SOYBEANS, COTTONSEEDS, AND SUNFLOWER SEEDS. Ronald D. Moen, Neotec Corporation
- 10:40 216. PULSED NUCLEAR MAGNETIC RESONANCE DETERMINATION OF SOLID FAT CONTENT. Jack H. Mellema, Kraft, Inc., Bryan L. Madison, The Procter & Gamble Co., and Robert G. Manning, Glidden Durkee Foods
- 11:00 217. A COMPARISON OF VISUAL AND ELECTRONIC METHODS OF OIL COLOR EVALUATION. Robert F. Conley, Mineral and Resource Technology
- 11:20 218. EVALUATION OF THE FACTORS THAT INFLUENCE THE PRECISION AND ACCURACY OF THE ANALYSIS OF SHORT-CHAIN FATTY ACIDS. A POSSIBILITY FOR IMPROVEMENT. Giovanni Bigalli and Robert D. Houseal, Jr., Hershey Foods Corporation

10:00 a.m.—Wildcatter Room

SESSION 34—General: Fats and Surfactants

Chairman: Jean-Paul Helme, Lesieur-Cotelle et Associes,

Boulogne Billancourt, France

- 10:00 219. QUALITY OF LIPIDS IN DEEP FAT FRIED PRODUCTS. S.N. Sultana and D.P. Sen, Central Food Technological Research Institute, India
- 10:20 220. FRACTIONATION OF DHUPA FAT (*Vateria indica*). B.P. Baliga and A.D. Shitole, M/S Tata Oil Mills Co. Ltd., India
- 10:40 220A. THE UNIQUE FEATURES OF THE DE SMET DEODORIZER. C. Louis Kingsbaker and G. Posschelle, De Smet USA
- 11:00 221. SOAP STABILIZATION USING SODIUM BORO-HYDRIDE. Richard A. Mikulski, Alice M. Devaney and Michael M. Cook, Thiokol Corp./Ventron Division
- 11:20 222. IMPROVING FLOW AND ANTICAKING PROPERTIES OF HEAVY DUTY DETERGENTS USING FUMED SILICA. Terence F. Conlon, Vaughn W. Taylor and William F. Moll, Cabot Corporation
- 11:40 223. MANUFACTURE AND PROPERTIES OF SYNDET BARS. Martin Hollstein, Zschimmer & Schwarz, West Germany

10:00 a.m.—Bayou II

SESSION 35—General: Fatty Acid Metabolism III

Chairman: R.J. Berni, Southern Regional Research Center, USDA, New Orleans, LA

- 10:00 224. BIOLOGICAL EFFECTS IN RATS OF DIETARY CYCLOPROPENOID FATTY ACIDS NATURALLY PRESENT IN COTTONSEED OIL. Lucy L. Fan, Barney W. Hilton and Alan Wohlman, Frito-Lay, Inc.
- 10:20 225. THE FATTY ACID ANALYSIS OF THE TISSUE LIPID OF RATS FED BROMINATED CORN OIL AND BROMINATED MONOGLYCERIDES. Barbara A. Jones, Ian J. Tinsley, Robert R. Lowry and Glenn Wilson, Oregon State University
- 10:40 226. THE EFFECT OF FEEDING DI-(2-ETHYLHEXYL) PHTHALATE AND RELATED COMPOUNDS ON LIPIDS IN THE LAYING HEN. Joel Bitman and D.L. Wood, Milk Secretion & Mastitis Lab, USDA
- 11:00 227. SUBCELLULAR LOCALIZATION OF DOLICHOL AND OF ENZYMES OF DOLICHOL METABOLISM IN RAT LIVER. J.W. Rip, University of Western Ontario, C.A. Rupar, University of Cambridge, N. Chaudhary and K.K. Carroll, University of Western Ontario
- 11:20 228. THE BEHAVIOR OF LIPOXYGENASE IN HYDROCARBON MICELLAR SOLUTION. Peter Meier, Sandro Palmieri and Pier Luigi Luisi, Swiss Federal Institute of Technology, Switzerland

2:00 p.m.—Gold Room

SESSION 36—Symposium: Commercial Aspects of Plant Proteins

Chairman: E. McCabe, Westreco, Marysville, OH

- 2:00 INTRODUCTORY REMARKS.
- 2:05 229. BY-PRODUCT UTILIZATION FROM OIL SEED PROTEIN PROCESSING. J.W. Finley, R.H. Edwards and G.O. Kohler, Western Regional Research Center, USDA
- 2:25 230. OHIO CURD. Andrew C. Peng, Ohio State University
- 2:45 231. PETROLEUM-FREE EXTRACTION OF SOYBEANS WITH SUPERCRITICAL CO₂. J.P. Friedrich, G.R. List and A.J. Heakin, Northern Regional Research Center, USDA
- 3:05 232. TOMATO SEEDS—A POTENTIAL SOURCE OF PROTEIN. J.R. Geisman, Ohio State University
- 3:25 233. COMMERCIAL CONSIDERATIONS IN PRODUCING VEGETABLE PROTEIN ISOLATES AND CONCENTRATES. Dale Johnson, Food Ingredients, Inc.
- 3:45 234. TEXTURIZATION OF SOY PROTEINS—A REVIEW. J.G. Endres, Central Soya
- 4:05 235. PROTEIN DETERMINATION IN OILSEED CROPS USING NMR. Raymond F. Bailey, Newport Instruments, United Kingdom

1:30 p.m.—University Room

SESSION 37—Walter A. Pons, Jr., Memorial Symposium: Mycotoxins V

Chairmen: E.B. Lillehoj (presiding) and L.A. Goldblatt, Southern Regional Research Center, USDA, New Orleans, LA

- 1:30 INTRODUCTION.
- 1:35 236. TOXICITY AND METABOLISM OF PENICILLIC ACID. A. Wallace Hayes and Peter Chan, Rohm and Haas Company
- 2:05 237. DEFENSES AGAINST AFLATOXIN CARCINOGENESIS IN MAN. M. Sid Masri, Western Regional Research Center, USDA
- 2:20 238. SOME PERSPECTIVES ON MYCOTOXIN CARCINOGENICITY AND HUMAN HEALTH. T. Colin Campbell, Cornell University

2:00 p.m.—Creole Room

SESSION 38—General: Antioxidants

Chairman: Homer S. Black, Veterans Administration Medical Center, Houston, TX

- 2:00 239. INFLUENCE OF VITAMIN E ON LUNG AND LIVER MICROSOMAL LIPID PEROXIDATION. Alex Sevanian, Nabil Elsayed and Allen D. Hacker, University of California at Los Angeles
- 2:20 240. FURTHER STUDIES ON THE MECHANISM OF BHT PHOTOPROTECTION. Homer S. Black and Virginia McCann, Veterans Administration Medical Center and Baylor College of Medicine
- 2:40 241. A GAS CHROMATOGRAPHIC REACTOR TO MEASURE THE EFFECTIVENESS OF ANTI-OXIDANTS FOR POLYUNSATURATED LIPIDS. J. Assis F. Faria, UFV- Brazil, and Seymour G. Gilbert, Rutgers University
- 3:00 242. SIMULTANEOUS ANALYSIS OF BHA, TBHQ, BHT AND PROPYL GALLATE BY GAS CHROMATOGRAPHY AS EXTRACTED FROM REFINED VEGETABLE OIL. David M. Wyatt, Eastman Chemical Products
- 3:20 243. TBHQ ANTIOXIDANT IN REFINED SUNFLOWER OIL. Dan F. Buck, Eastman Chemical Products

2:00 p.m.—Explorer's Room

SESSION 39—Symposium: Surfactants in Textiles III

Chairmen: A.M. Schwartz (presiding), Consultant, Rockville, MD, and M.J. Schick, Diamond Shamrock Corporation, Morristown, NJ

- 2:00 244. BLOCK COPOLYMER SURFACTANTS IN TEXTILES. I.R. Schmolka, BASF Wyandotte Corporation
- 2:30 245. NEW DEVELOPMENTS IN SHRINK RESIST TREATMENTS FOR WOOL. M.R. Porter, Diamond Shamrock Europe Ltd.
- 3:00 246. THE CLEANING OF KERATIN FIBERS WITH AQUEOUS SURFACTANTS. M.M. Breuer, Gillette Research Institute
- 3:30 247. DETERGENCY IN NONAQUEOUS SYSTEMS. M. Wentz, University of Wisconsin
- 4:00 248. CATIONIC SURFACTANTS IN TEXTILE MATERIALS. G.C. Tesoro, Massachusetts Institute of Technology
- 4:30 249. TEXTILE SOFTENERS. R.A. Reck, Armak Company

2:00 p.m.—Bayou II

SESSION 40—Evald L. Skau Memorial Symposium: D. Analytical Methodology II

Chairmen: W.G. Doeden, Swift and Co., Oak Brook, IL, and R. Bowers, General Mills, Minneapolis, MN

- 2:00 250. HPLC AND FAST TLC IN THE ANALYSIS OF OILS. Dennis K. McCreary, Dittmar Wulff and William G. America, Milton Roy Co.

- 2:20 251. QUANTITATION OF ISOMERIC UNSATURATED FATTY ACIDS BY IATROSCAN CHROMARODS COATED WITH SILVER NITRATE. J.-L. Sebedio and R.G. Ackman, Technical University of Nova Scotia

- 2:40 252. ALUMINA THIN LAYER CHROMATOGRAPHY OF FATTY ACID METHYL ESTERS: SEPARATION BASED ON NUMBER OF DOUBLE BONDS. Robert R. Lowry, Ian J. Tinsley and Barbara A. Jones, Oregon State University

- 3:00 253. AN HPLC METHOD FOR QUANTIFICATION OF FREE ACIDS, MONO-, DI- AND TRIGLYCERIDES USING AN INFRARED DETECTOR. Kathleen L. Payne-Wahl, Gayland F. Spencer, Ronald D. Plattner and Royden O. Butterfield, Northern Regional Research Center, USDA

- 3:20 254. LIPID AND SURFACTANT ANALYSIS IN CAKE MIXES. Linda G. Sherwin and Sharon L. Melton, University of Tennessee

2:00 p.m.—Wildcatter Room

SESSION 41—Symposium: Sterols IV: Sterols in Microorganisms

Chairmen: B.A. Knights (presiding), University of Glasgow, Scotland, and H.W. Kircher, University of Arizona, Tucson

- 2:00 255. ASPECTS OF STEROL METABOLISM IN YEAST AND PHYTOPHTHORA. Leo W. Parks, Fred R. Taylor, Colleen McLean-Bowen, Cynthia Bottema, Russel Rodriguez and Robert Gonzales, Oregon State University

- 2:30 256. THE USE OF MUTANTS AND AZA STEROLS IN STUDIES OF YEAST STEROL BIOSYNTHESIS. A.C. Oelschlager, H.D. Pierce, Jr., A.M. Pierce, R. Angus, E. Quantin-Martenot and A.M. Unrau, Simon Fraser University, B.C., Canada

- 3:00 257. THE ROLE OF STEROIDS AND PENTACYCLIC TRITERPENOIDS IN THE GROWTH AND REPRODUCTION OF *Phytophthora cactorum*. W. David Nes, Gary A. Saunders and Erich Heftmann, Western Regional Research Center, USDA

- 3:30 258. THE EFFECT OF MEMBRANE STEROL COMPOSITION ON FATTY ACID SYNTHESIS IN *Saccharomyces cerevisiae*. Thomas M. Buttke, University of Mississippi Medical Center, Rebecca Reynolds and Susan Jones, Harvard University

- 4:00 259. STEROLS IN THE SYSTEMATICS OF *Chlorella*. Marcia J. Holden and Glenn W. Patterson, University of Maryland

- 4:30 260. YEAST-CACTUS ECOLOGY. Henry W. Kircher and James Fogleman, University of Arizona, and Thomas Starmer, Syracuse University

2:00 p.m.—Bayou II

SESSION 42—General: Lipid Chemistry

Chairman: R.O. Feuge, Southern Regional Research Center, USDA, New Orleans, LA

- 2:00 261. REMOVAL OF 1,4-DIOXANE FROM ETHOXYLATES OF PRIMARY AMINES, FATTY ACIDS AND POLYETHYLENE GLYCOL ESTERS OF FATTY ACIDS. R.S. Shetty, E.Carr, R.S. McDaniel, Jr., and G.D. Lichtenwalter, Armak Co.

- 2:20 262. INTERACTIONS OF PHOSPHOLIPIDS WITH CHARGE-TRANSFER AGENTS. William N. Marmer and Philip E. Pfeffer, Eastern Regional Research Center, USDA

- 2:40 263. Cancelled

- 3:00 264. PRACTICAL ASPECTS OF HYDROGENATION OF VEGETABLE OILS WITH NICKEL-SULFUR CATALYST. D.V. Okonek and W.R. Alcorn, The Harshaw Chemical Company

- 3:20 265. INVESTIGATION AND MODELING OF MASS TRANSFER IN HYDROGENATION REACTORS. A.H. Chen and D.D. McIntire, Anderson Clayton Foods

- 3:40 266. A NOVEL TRIPHENYLMETHYLFLUORO-

- BORATE OXIDATION OF O^1 -HEXADECYL- O^4 , O^3 -ISOPROPYLIDENEGLYCEROL BY HYDRIDE TRANSFER. Joseph G. Turcotte, University of Rhode Island, and David A. Marsh, Massachusetts College of Pharmacy
- 4:00 267. PREPARATION OF METHYL LINOLEATE-16, 16, 17, 17- d_4 l. R.O. Adlof and E.A. Emken, Northern Regional Research Center, USDA
- 4:20 268. SYNTHESIS OF METHYL (6-ALKYL-3-CYCLOHEXENYL) ALKENOATES AS MODEL CYCLIC FATTY ACID ESTERS. R.A. Awl and E.N. Frankel, Northern Regional Research Center, USDA
- 4:40 269. INTERESTERIFIED BLENDS OF CORN OIL AND EDIBLE TALLOW FOR USE AS MARGARINE OILS. A. Philip Handel and Oscar Chacon, University of Nebraska

2:00 p.m.—International Ballroom

SESSION 43—Poster Session

270. THE LIPIDS OF SOME LACTIFEROUS PLANTS. J.B.M. Rattray, J.R. Alex and G.W. Anderson, University of Guelph
271. NUTRITIONAL SIGNIFICANCE OF PHYTATE AND OXALATE CONTENT IN AMARANTH GRAIN. Joseph P. Senft, Rodale Organic Gardening and Farming Research Center, and Barbara F. Harland, Food and Drug Administration
272. ONTOGENY OF LIPID METABOLISM IN SOYBEANS WITH ALTERED FATTY ACID COMPOSITION. R.F. Wilson and B.F. Carver, North Carolina State University
273. FATTY ACID COMPOSITION OF THE METHATHORACIC LEG MUSCLE, VENTRAL NERVE CORD AND SPERMATOPHYTES OF THE HOUSE CRICKET (*Acheta domestica*). R.E. Worthington and U.E. Brady, University of Georgia
274. MORPHOLOGY AND FATTY ACID COMPOSITION OF IMMATURE RED CELLS IN PHENYLHYDRAZINE TREATED RATS. Steven C. Goheen, Edward C. Larkin, Elaine E. Lahue and G. Ananda Rao, VA Medical Center, CA
275. A GAS CHROMATOGRAPHIC REACTOR TO MEASURE LIPID OXIDATION. J. Assis F. Faria, UFV-Brazil, and Seymour G. Gilbert, Rutgers University

Thursday, May 21

9:00 a.m.—Gold Room

SESSION 44—Symposium: Plant Proteins II

Chairmen: E.W. Lusas, Texas A&M University, College Station, TX, and B. Struthers, Ralston Purina Co., St. Louis, MO

- 9:00 276. RACEMIZATION OF AMINO ACIDS IN PROTEINS AND PROTEIN FOODS. J.W. Finley, D.W. Schwass and W.G. Horn, Western Regional Research Center, USDA
- 9:20 277. EFFECT OF ULTRASONIC COMMINUTION ON LIQUID CLASSIFICATION OF COTTONSEED PROTEIN AND GOSSYPOL PIGMENT GLANDS. R.J. Hron, Sr., and A.V. Graci, Southern Regional Research Center, USDA
- 9:40 278. EFFECTS OF RESIDUAL LINTERS ON COTTONSEED OIL AND MEAL YIELDS. L.A. Johnson, S.P. Clark and E.W. Lusas, Texas A&M University
- 10:00 279. PRODUCTION OF EDIBLE COTTONSEED FLOUR BY AIR CLASSIFICATION OF GLANDED COTTONSEED: COST ANALYSIS. K.M. Decossas, J.J. Spadaro, R.S. Kadan and G.M. Ziegler, Jr., Southern Regional Research Center, USDA
- 10:20 280. REVIEW OF GLANDLESS COTTONSEED: PROCESSING AND UTILIZATION. E.W. Lusas, J.T. Lawhon, K.C. Rhee and R.G. Simmons, Texas A&M University
- 10:40 281. PREPARATION AND COMPOSITION OF A DRY MILLED FLOUR FROM COWPEAS. R.D. Phillips, University of Georgia

- 11:00 282. INVESTIGATING SOLVENT RESIDUALS IN SOYBEAN MEAL AND SOLVENT CONTENT OF VENTED STREAMS. R.L. Chessin, Research Triangle Institute
- 11:20 283. THE ART OF COTTONSEED MEAL SCREENING AND GRINDING. George R. Thomas, Prater Industries, Inc.
- 11:40 284. OUR EXPERIENCE IN PROCESSING MATERIALS WITH HIGH PERCENTAGE OF DUST SUCH AS CORN (MAIZE), RICE BRAN AND SUNFLOWER CAKE. H.L.S. Staff, H.L.S. Ltd., Israel

9:00 a.m.—University Room

SESSION 45—General: Prostaglandins and Low Density Lipoproteins

Chairman: A. Uzzan, Institut des Corps Gras, Paris, France

- 9:00 285. PROSTAGLANDIN AND ZINC INTERACTION IN THE GASTROINTESTINAL TRACT. Simin Nikbin Meydani and Jacqueline Dupont, Iowa State University
- 9:20 286. DISCOVERY OF A NEW PROSTAGLANDIN, C22-PGF_{4 α} , DERIVED FROM DOCOSAHEXAENOIC ACID (C22:6n3) IN THE GILL OF RAINBOW TROUT (*Salmo gairdneri*). Jimbin Mai, Geza Bruckner, Satindra Goswami and John Kinsella, Cornell University
HONORED STUDENT PRESENTATION
- 9:40 287. CONTROL OF PROSTAGLANDIN E₂ SYNTHESIS IN VARIOUS TISSUES BY THE ALTERATION OF THE DIETARY RATIO OF α -LINOLENIC TO LINOLEIC ACID. Lisa A. Marshall and Patricia V. Johnston, University of Illinois
- 10:00 288. DETERMINATION OF MOLECULAR WEIGHTS OF HUMAN LOW DENSITY LIPOPROTEINS (LDL) BY SEDIMENTATION EQUILIBRIUM. Talwinder Kahlon, University of California at Berkeley, Mason M.S. Shen, Lawrence Livermore Laboratory, Tjet M. Sun, Frank T. Lindgren and Gerald L. Adamson, University of California at Berkeley
- 10:20 289. A FACILE FLUOROMETRIC METHOD FOR STUDYING THE INTERACTIONS BETWEEN SERUM LIPOPROTEINS AND DETERGENTS OR DENATURANTS. Arthur W. Kruski and Lorraine A. Chidoni, The University of Texas Health Science Center at San Antonio

9:00 a.m.—Explorer's Room

SESSION 46—Symposium: Surfactants in Textiles IV

Chairmen: E. Jungermann (presiding), Jungermann Associates, Tucson, AZ, and M.J. Schick, Diamond Shamrock Corporation, Morristown, NJ

- 9:00 290. INTERACTION OF CATIONIC SOFTENERS WITH NONIONIC DETERGENTS. J. Williams, Sherex Chemical Company
- 9:30 291. CHEMICAL AND PHYSICAL CHARACTERISTICS OF FIBER LUBRICANTS. H.T. Patterson, E.I. Dupont de Nemours & Co.
- 10:00 292. LINEAR ALKYL BENZENE SULFONATES (LAS) IN THE PREVENTION OF VAGRANT DYE PICKUP ON POLYESTER TEXTILES. K.P. Lannert and M.M. Crutchfield, Monsanto Industrial Chemicals Company
- 10:30 293. TYPES OF SURFACTANTS USED IN DYEING NYLON AND ACRYLIC FIBERS. H.D. Pratt, Jr., Crucible Chemical Company
- 11:00 294. USE OF SURFACTANTS IN THE DYEING OF POLYESTER FIBER. J.E. Nettles, Chemcon Consulting, Inc.

9:00 a.m.—Bayou I

SESSION 47—Symposium: Control of Hexane Losses

Chairman: L.R. Watkins, Anderson Clayton, Houston, TX

- 9:00 295. COMMON SOURCES OF HEXANE LOSS IN OIL

MILLS AND WAYS OF MINIMIZING LOSSES.
Glenn D. Brueske, Crown Iron Works Co.

- 9:25 296. CONTROLLING HEXANE LOSS THROUGH USE OF MINERAL OIL ABSORPTION. William Barger, French Oil Mill Machinery Co.
- 9:50 297. NEW CONCEPTS IN ENERGY CONSERVATION AND HEXANE RECOVERY. Roger Hansotte, Dravo Corporation
- 10:15 298. LABORATORY PROCEDURES FOR QUANTIFYING HEXANE LOSSES IN THE SOLVENT PLANT. George Cavanaugh, Ranchers Cotton Oil Co.
- 10:40 299. CORROSION IN SOLVENT PLANTS: CAUSE AND PREVENTION. Leslie R. Watkins, Anderson Clayton

9:00 a.m.—Wildcatter Room

SESSION 48—Symposium: Sterols V: Functions of Sterols in Plants and Animals

Chairmen: L.W. Parks (presiding), Oregon State University,

Corvallis, and H.W. Kircher, University of Arizona, Tucson

- 9:00 300. THE USE OF DEUTERIUM LABELED STEROLS AND STEROIDS TO INVESTIGATE STEROID INTERCONVERSIONS IN ANIMALS AND PLANTS. L. John Goad, Micheal Breen and Nigel Rendall, University of Liverpool, England
- 9:30 301. THE MECHANISM OF CHOLESTEROL TURN-OVER IN THE CNS. Harold J. Nicholas, Institute of Medical Education and Research, St. Louis, MO
- 10:00 302. SURFACE PROPERTIES OF STEROL-PHOSPHOLIPID MIXTURES AT THE AIR-WATER INTERFACE. R.W. Evans, J. Tinoco and M.A. Williams, University of California at Berkeley
- 10:30 303. STRUCTURAL REQUIREMENTS FOR STEROL IN AN LM CELL (MOUSE FIBROBLAST) STEROL AUXOTROPH. Chanatip Rujanavech and David Silbert, Washington University, St. Louis
- 11:00 304. THE FITNESS OF STEROLS. W.R. Nes, Drexel University

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