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**TECHNICAL PROGRAM**

**of the**

**JOCS-AOCS 1972 JOINT  
MEETING**



**APRIL 23-26, 1972**

**Los Angeles Hilton Hotel**

**Los Angeles, California**

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## MONDAY AFTERNOON—APRIL 24

2:00 P.M.—Golden State Room

### SESSION A—SYMPOSIUM: TUMOR LIPIDS, BIOCHEMISTRY AND METABOLISM

Chairman—Randall Wood, University of Missouri, Columbia

2:00 **WELCOME**  
Randall Wood, University of Missouri School of Medicine

2:05 **1. LIPOPROTEINS OF EHRLICH ASCITES TUMOR PLASMA**

Arthur A. Spector, Douglas Brennenman, Jaice M. Soboroff, University of Iowa

2:40 **2. FATTY ACIDS AS METABOLIC FUELS OF CANCER CELLS**

Sidney Weinhouse, Jennie A. Shatton, John Langan, Harold P. Morris, Fels Research Institute, Temple University and Howard University

3:00 **3. PROTEOLIPIDS ASSOCIATED WITH MALIGNANT NANCY**

Vladimir P. Skipski, Sloan-Kettering Institute for Cancer Research

3:20 **4. DEFECTIVE CONTROL OF CHOLESTEROL METABOLISM AND THE DEVELOPMENT OF LIVER CANCER: A REVIEW**

John R. Sebine, University of Adelaide, Australia

4:00 **5. REGULATION OF CHOLESTEROL BIOSYNTHESIS IN HTC CELLS**

John A. Watson, University of California, San Francisco

4:20 **6. A POSSIBLE ROLE OF CHOLESTERYL 14-METHYHEXADECANOATE IN MALIGNANT GROWTH**

J. Hradec, Oncological Institute, Prague, Czechoslovakia

## MONDAY AFTERNOON—APRIL 24

2:00 P.M.—Garden Room

### SESSION B—NUTRITION AND GENERAL

Chairman—Lillie Atergood, School of Public Health, University of California, Los Angeles

2:00 **7. ABSORPTION AND LYMPHATIC TRANSPORT OF FAT IN THE ESSENTIAL FATTY ACID-DEFICIENT RAT**

M.A. Reidy, B.L. Walker, University of Guelph, Guelph, Ontario, Canada

2:20 **8. STUDIES OF THE INTERRELATIONSHIPS OF VITAMIN E DEFICIENCY AND DIETARY FAT**

### ON MEMBRANE PROPERTIES

O.S. Privett, Reto Cortesi, The Hormel Institute, University of Minnesota, Austin

2:40 **9. INTERACTIONS BETWEEN STEROLS AND INDIVIDUAL PURE LECITHINS IN MONOLAYERS AT THE AIR-WATER INTERFACE**

J. Tinoco, D. Ghosh, University of California, Berkeley

3:00 **10. EFFECT OF DIETARY MODIFICATIONS ON AFLATOXIN TOXICITY IN THE RAT**

P. Wells, L. Afergood, L. Grossman, R.B. Alfinslater, School of Public Health, University of California, Los Angeles

3:20 **11. EFFICIENCY OF TRANSFER OF POLYUNSATURATED FATS IN MILK**

John Bitman, L.P. Dryden, H.K. Goering, T.R. Wrenn, R.A. Yancoskie, L.F. Edmondson, Agricultural Research Center, Beltsville, Maryland

3:40 **12. DETERIORATION OF EGG YOLK LIPOPROTEIN BY LONG RANGE STORAGE**

Ichiro Hara, Hiroyuki Shimazaki, Jim Sato, Tokyo Medical and Dental University, Chiba, Japan

4:00 **13. BIODEGRADABILITY OF QUANTENARY AMONIUM BIOCIDES**

L.J. Gawal, Continental Oil Co., Ponca City, Oklahoma

## MONDAY AFTERNOON—APRIL 24

2:00 P.M.—Sierra Room

### SESSION C—SYMPOSIUM: GAS LIQUID CHROMATOGRAPHY (JOINT AOCs AND JOCS)

Chairman—T. Hashimoto, Government Industrial Research Institute, Tokyo, Japan

Cochairman—L. Metcalfe, Armak Company, McCook, Illinois

2:00 **14. TWENTY YEARS: GAS CHROMATOGRAPHY IN LIPID ANALYSIS**

L.D. Metcalfe, Armak Co., McCook, Illinois

2:30 **15. DETERMINATION OF FATTY ACID COMPOSITION BY GAS CHROMATOGRAPHY (1) ANALYSIS WITH THE USE OF THE THERMAL CONDUCTIVITY DETECTOR**

Yutaka Usui, Shigeo Hayano, Toshimi Akiya, Keizaburo Mimura, Satoshi Nakasato, Hajime Seino, Shiochiro Watanabe, JOCS Gas Chromatography Committee

3:00 **16. DETERMINATION OF FATTY ACID COMPOSITION BY GAS CHROMATOGRAPHY (2) ANALYSIS WITH THE USE OF THE FLAME**

### IONIZATION DETECTOR

Maseaki Negishi, Soichiro Watanabe, Shigeo Hayano, Hideo Kuwayama, Toshio Nagai, Satoshi Nakasato, Yukihiko Sasamoto, Hajime Seino, Shinsaku Shiraiishi, JOCS Gas Chromatography Committee

3:30 **17. UTILITY OF THE NITROGEN SELECTIVE DETECTOR IN THE GAS CHROMATOGRAPHY OF LONG CHAIN NITROGEN COMPOUNDS**

Robert J. Jakubiac, L.D. Metcalfe, Boyd Boer, Chu Nan Wang, Armak Co., McCook, Illinois

4:00 **18. INFLUENCES OF OPERATING CONDITIONS ON THE DETERMINATION OF FATTY ACID METHYL ESTERS BY GAS CHROMATOGRAPHY**

Hajime Seino, Shiochiro Watanabe, Toshio Nagai, Tsuneo Nihongi, Kitasato University, Japan, and Lion Fat and Oil Co., Ltd., Tokyo

## MONDAY AFTERNOON—APRIL 24

2:00 P.M.—Los Angeles Room

### SESSION D—SYMPOSIUM: PROCESSING OF UNUSUAL OILS

Chairman—C.L. Kingsbaker, Blaw-Knox Chemical Plants, Inc., Pittsburgh, Pennsylvania

2:00 **19. PROCESSING OF COPRA**

Dallas Rehn, Cargill, Inc.

2:30 **20. PROCESSING OF SUNFLOWER**

Martin Horsman, O.J. Jones, Anderson Clayton Co.

3:00 **21. PROCESSING OF RAPESEED**

H.H. Michael, Western Canadian Seed Processors, Ltd.

3:30 **22. PROCESSING OF SESAME**

John D. Simpson, Anderson Clayton Co.

4:00 **23. PROCESSING OF SAFFLOWER**

John D. Simpson, Anderson Clayton Co.

4:30 **24. THE WET FRACTIONATION OF ALFALFA**

Donald de Fremery, Western Regional Research Laboratory

## TUESDAY MORNING—APRIL 25

9:00 A.M.—Golden State Room

### SESSION E—SYMPOSIUM: TUMOR LIPIDS, BIOCHEMISTRY AND METABOLISM

Chairman—Arthur A. Spector, University of Iowa, Ames

9:00 **25. LOSS OF BRAIN LIPID CONSTANCY IN**

**HUMAN INTRACRANIAL TUMORS**  
Harold B. White, Jr., University of Mississippi  
School of Medicine, Jackson

9:20 26. **PHOSPHOLIPID TURNOVER IN NORMAL AND  
CANCER CELLS**  
C.A. Pasternak, University of Oxford, U.K.

9:40 27. **TUMOR LIPIDS: METABOLIC AND STRUC-  
TURAL STUDIES OF EHRlich ASCITES  
CARCINOMA CELLS**  
Randall Wood, University of Missouri School of  
Medicine, Columbia

10:00 28. **A COMPARATIVE STUDY OF LECITHINS IN  
TWO HEPATOMAS WITH DIFFERENT DEGREE  
OF DIFFERENTIATION AND IN LIVERS OF  
TUMOR-BEARING RATS**  
S. Ruggieri, A. Fallini, University of Florence,  
Italy

10:20 29. **LIPID CLASS COMPOSITION OF PLASMA  
MEMBRANES ISOLATED FROM RAT AND  
LIVERS AND HEPATOMAS**  
R.P. van Hoeven, P. Emmelot, The Netherlands  
Cancer Institute, The Netherlands

10:40 30. **LIPIDS OF THE PLASMA MEMBRANES,  
MITOCHONDRIA AND NUCLEI OF BP 8  
ASCITES SARCOMA CELLS**  
G.M. Gray, B.J. Dod, W. Segal, Lister Institute,  
London, England

11:20 31. **CHEMICAL DIFFERENTIATION OF MEM-  
BRANES IN THE TUMOR CELL**  
L.D. Bergelson, E.V. Dyatlovitskaya, Academy of  
Sciences, Moscow, U.S.S.R.

11:40 32. **THE MOLECULAR STRUCTURE OF TUMOR  
LECITHINS AND ITS RELEVANCE TO SOME  
PROPERTIES OF TUMOR CELL MEMBRANES**  
L.D. Bergelson, Academy of Sciences, Moscow,  
U.S.S.R.

#### TUESDAY MORNING—APRIL 25

9:00 A.M.—Sierra Room

#### SESSION F—SYMPOSIUM: GAS LIQUID CHROMATOGRAPHY (JOINT JOCS-AOCS)

Chairman—T. Hashimoto, Government Industrial Research  
Institute, Tokyo, Japan

Cochairman—L. Metcalfe, Armak Co., McCook, Illinois

9:00 33. **CYCLIC ESTERS**  
Hyozo Kusaka, Noboru Matsuo, Seikei University,  
Tokyo, Japan

9:30 34. **DIRECT GAS CHROMATOGRAPHIC EX-  
AMINATION OF VOLATILES IN SALAD OILS  
AND SHORTENINGS**

Harold P. Dupuy, Sara P. Fore, Leo A. Gold-  
blatt, Southern Marketing and Nutrition, U.S.  
Department of Agriculture, New Orleans,  
Louisiana

10:00 35. **IDENTIFICATION OF ALPHA-BRANCHED  
CHAIN BETA-HYDROXY FATTY ACIDS BY  
COMBINED GAS CHROMATOGRAPHIC-MASS  
SPECTROMETRIC TECHNIQUES**  
Ikuya Yano, Kunihiko Saito, Kansai Medical  
School, Osaka, Japan

10:30 36. **GAS CHROMATOGRAPHY-MASS SPECTROM-  
ETRY OF CYCLIC FATTY ACID ESTERS**  
Wayne T. Iwaoaka, Edward G. Perkins, University  
of Illinois, Urbana

11:00 37. **A RAPID PROCEDURE FOR GAS CHRO-  
MATOGRAPHIC ANALYSIS OF VITAMINS D,  
E AND K**  
S. Dewan, N.D. Heidelbaugh, R.T. Ehrlich, H.O.  
Wheeler, Technology, Inc., Houston, Texas

11:30 38. **GAS CHROMATOGRAPHY-MASS SPECTROM-  
ETRY OF METHYL ESTERS OF UNSATURATED  
OXYGENATED FATTY ACIDS**  
R. Kleiman, G.E. Spencer, Northern Regional  
Research Laboratory, U.S. Department of Agri-  
culture, Peoria, Illinois

#### TUESDAY MORNING—APRIL 25

9:00 A.M.—Garden Room East

#### SESSION G—SYMPOSIUM: DETERGENTS

Chairman—T. Asahara, University of Tokyo, Japan  
Cochairman—R. Liss, Monsanto Co., St. Louis, Missouri

9:00 39. **BIODEGRADATION OF AOS AND OTHER  
SURFACTANTS**  
Hifoshi Sekiguichi, Kazuaki Miura, Kenkichi Oba,  
Akira Mori, Lion Fat and Oil Co., Tokyo, Japan

9:30 40. **LINEAR ALKYL BENZENE SULFONATE (LAS)  
BENZENE RINGS: BIODEGRADATION AND  
ACCLIMATION STUDIES**  
R.D. Swisher, Monsanto Co., St. Louis, Missouri

10:00 41. **THE STATUS REPORT ON THE BIODEGRADA-  
TION TEST METHOD OF NONIONIC SUR-  
FACTANTS**  
Teruzo Asahara, Hifoshi Sekiguichi, Hiroshi  
Akabayashi, Nebuta Hayashi, Kenkichi Oba,  
JOCS Detergent Committee

10:30 42. **BIODEGRADABILITY OF NONIONIC SUR-  
FACTANTS: A SCREENING TEST FOR PRE-  
DICTING RATE AND ULTIMATE BIODEGRADA-  
TION**

R.N. Sturm, The Procter and Gamble Co.,  
Cincinnati, Ohio

11:00 43. **PANEL DISCUSSION: BIODEGRADATION OF  
NONIONICS**

Panelists: H. Arai, K. Yamanaka, H. Sekiguchi,  
JOCS; and R.L. Bunch, Environmental Protection  
Agency, Cincinnati, Ohio; R.N. Sturm, Procter  
and Gamble Co., Cincinnati, Ohio; R.D. Swisher,  
Monsanto Co., St. Louis, Missouri.

#### TUESDAY MORNING—APRIL 25

9:00 A.M.—Garden Room West

#### SESSION H—GENERAL: PROCESSING OF OILS AND FATS

Chairman—John Barrett, Purex Corp., Wilmington, California

9:00 44. **TWO STEP BLEACHING WITH NATURAL AND  
ACTIVATED CLAYS**  
Ernst H. Goebel, Tensil Mexicana, Mexico City,  
Mexico

9:20 45. **THE DEVELOPMENT OF EDIBLE TALLOW  
FRACTIONS FOR SPECIALTY FAT USES**  
Francis E. Luddy, J.W. Hampson, S.F. Herb,  
H.L. Rothbart, Eastern Regional Research  
Laboratory, U.S. Department of Agriculture,  
Philadelphia, Pennsylvania

9:40 46. **PURIFICATION OF BETA-SITOSTEROL**  
Henry W. Kircher, Fumiko U. Rosenstein, Uni-  
versity of Arizona, Tucson

10:00 47. **DESICCATION OF FRESH COCONUT**  
D.H. Hertel, M.A. Williams, H.R. Strop, Ander-  
son IBC, Strongsville, Ohio

10:20 48. **TREATMENT OF SOYBEAN OIL SOAPSTOCK  
TO REDUCE POLLUTION**  
R.E. Beal, V.E. Sohns, H. Menge, Northern  
Marketing and Nutrition Research Division, U.S.  
Department of Agriculture, Peoria, Illinois

10:40 49. **WINTERIZATION OF SOYBEAN OIL**  
Noel W. Myers, Myers Roby Engineers, Decatur,  
Illinois

11:00 50. **A NEW REFINING OF PALM OIL**  
Masaaki Negishi, Haru Watanabe, Showa Sango  
Co., Ltd., Tokyo, Japan

11:20 51. **APPARENT LIQUID DIFFUSION EFFECT IN  
FAT HYDROGENATION**

C.R. Scholfield, R.O. Butterfield, H.J. Dutton, Northern Utilization Research and Development Division, U.S. Department of Agriculture, Peoria, Illinois

11:40 52. HYDROGENATION OF *cis-9*, *cis-12*, *cis-9*, *trans-12* AND *trans-9*, *trans-12*-OCTADECADIENOATES  
C.R. Scholfield, Northern Utilization Research and Development Division, U.S. Department of Agriculture, Peoria, Illinois

## TUESDAY MORNING—APRIL 25

9:00 A.M.—Los Angeles Room

### SESSION I—GENERAL: BIOCHEMISTRY

Chairman—James F. Mead, Nuclear Medicine and Radiation Biology, UCLA Los Angeles, California

9:00 53. COMPARATIVE FEATURES OF INTESTINAL STEROL METABOLISM IN PIGEON AND CHICKEN INTESTINES  
M.T. Ravi Subbiah, Bruce A. Kotte, Ivette A. Carlo, Cynthia M. Jones, Mayo Clinic and Mayo Foundation, Rochester, Minnesota

9:20 54. STRUCTURAL AND METABOLIC HETEROGENEITY OF HEPATIC PHOSPHATIDYLINOSITOL  
B.J. Holub, A. Kuksis, University of Toronto, Toronto, Canada

9:40 55. EFFECT OF HEATED FAT ON THE METABOLISM OF  $1^{14}\text{C}$  ACETATE IN THE RAT  
M.K. Govind Rao, Edward G. Perkins, University of Illinois, Urbana

10:00 56. METABOLISM OF  $1^{14}\text{C}$  PALMITIC ACID IN THE DEVELOPING BRAIN  
Govind A. Dhopeswarker, Carole Subramanian, Laboratory of Nuclear Medicine and Radiation Biology, Los Angeles, California

10:20 57. SYNTHESIS AND ACTION OF PANCREATIC LIPASE ON ENANTIOMERIC NEUTRAL PLASMALOGENS  
V. Mahadevan, Veterans Administration Hospital, Minneapolis, Minnesota

10:40 58. BIOSYNTHESIS OF GLYCERYL ALKYL THIOETHERS: INCORPORATION OF HEXADECYL MERCAPTAN INTO THIOETHER AND THIOESTER LINKAGES BY MOUSE LIVER  
William J. Ferrell, Etienne Des Myter, University of Detroit, Detroit, Michigan

11:00 59. VARIATIONS IN  $\text{Sn-GLYCERO-3-PHOSPHATE ACYL TRANSFERASE}$  AND FATTY ACID SYNTHETASE ACTIVITIES IN RAT LIVER  
Rex D. Wiegand, Raymond Reiser, Texas A & M University, College Station

11:20 60. PENTACHLOROPHENOL AND FATTY ACIDS IN CULTURED CELLS *Oncorhynchus kisutch*  
David F. Hanes, Hugo M. Krueger, Sonoma State College and Oregon State University, Rohnert Park, California

11:40 61. QUANTITATIVE GENETIC VARIATION OF LECITHIN: CHOLESTEROL ACYLTRANSFERASE (LCAT)  
S.W. Cheung, K.W. Kang, P.L. Yu, Joe C. Christian, Indiana University Medical School, Indianapolis

## TUESDAY AFTERNOON—APRIL 25

2:00 P.M.—Golden State Room

### SESSION J—SYMPOSIUM: TUMOR LIPIDS, BIOCHEMISTRY AND METABOLISM

Chairman—John R. Sabine, University of Adelaide, Australia

2:00 62. LIPID METABOLISM OF NOVIKOFF RAT HEPATOMA CELLS  
William Steele, Howard Jenkins, The Hormel Institute, Austin, Minnesota

2:20 63. LIPID METABOLISM IN NORMAL AND TUMOR CELLS IN CULTURE  
Barbara V. Howard, J. Martyn Bailey, George Washington University Medical School, Washington, D.C.

2:40 64. THE ROLE OF ACYL DIHYDROXYACETONE PHOSPHATE IN TUMOR LIPID METABOLISM  
Amiya K. Hajra, University of Michigan, Ann Arbor.

3:20 65. GANGLIOSIDES OF HUMAN GASTRO-INTESTINAL TUMORS; A PRELIMINARY NOTE  
Sen-Hiroh Hakamori, Kiroaki Kawachi, Toho College of Pharmacy and University of Washington, Seattle

3:40 66. GANGLIOSIDE METABOLISM IN DNA TUMORIGENIC VIRUS TRANSFORMED MOUSE CELL  
Roscoe O. Brady, Peter T. Mora, National Institute of Health, Bethesda, Maryland

4:00 67. GLYCOLIPIDS IN VIROL ENVELOPES  
Hans-Dieter Klenk, Institute for Virologic, Frankfurt, Germany

4:30 68. VARIATIONS OF GLYCOSPHINGOLIPIDS IN CLONED MOUSE ADRENAL TUMOR CELLS IN CULTURE  
R.K. Murray, G. Yogeeswaran, B.P. Schimmer, University of Toronto, Toronto, Canada

## TUESDAY AFTERNOON—APRIL 25

2:00 P.M.—Sierra Room

### SESSION K—SYMPOSIUM: GAS LIQUID CHROMATOGRAPHY (JOINT JOCS-AOCS)

Chairman—T. Hashimoto, Government Industrial Research Institute, Tokyo, Japan

Cochairman—L. Metcalfe, Armak Co., McCook, Illinois

2:00 69. STUDIES ON THE ANALYTICAL LIQUID CHROMATOGRAPHY (ALC) OF LIPIDS VIA FLAME IONIZATION DETECTION  
A. Stolyhwo, O.S. Privett, The Hormel Institute, Austin, Minnesota

2:30 70. MASS CHROMATOGRAPHIC ANALYSIS OF VOLATILES  
H.J. Dutton, J.O. Ernst, Northern Utilization Research and Development Division, Department of Agriculture, Peoria, Illinois

3:00 71. RESOLUTION OF INTACT AMINOPHOSPHATIDES BY ARGENTATION THIN LAYER CHROMATOGRAPHY  
A. Kuksis, S.K.F. Yeung, L. Maria, University of Toronto, Toronto, Canada

## TUESDAY AFTERNOON—APRIL 25

2:00 P.M.—Garden Room East

### SESSION L—SYMPOSIUM: DETERGENTS

Chairman—T. Asahara, University of Tokyo, Japan

Cochairman—R. Liss, Monsanto Co., St. Louis, Missouri

1:30 72. SYNTHESIS OF CATIONIC SURFACE ACTIVE AGENTS WITH ALKENYL GROUP FROM I-OLEFINS  
Saburo Komori, Takehisa Ohashi, Yoko Ohashi, Mitsuo Okahara, Osaka University, Osaka, Japan

1:50 73. SOAP-BASED DETERGENT FORMULATIONS II, OXYETHYLATED FATTY AMIDES AS LIME SOAP DISPERSING AGENTS  
J.K. Weil, Eastern Marketing and Nutrition Research Division, U.S. Department of Agriculture, Philadelphia, Pennsylvania

2:10 74. PROPERTIES OF SUCROSE FATTY ACID ESTER  
Tetsuo Ishizuka, Takao Watanabe, Norio Mizutani, Fumiaki Yamagishi, Dai-Ichi Kogyo Seiyaku Co., Ltd. Kyoto, Japan

2:30 75. A STUDY OF THE BUILDUP OF RESIDUALS DURING MULTIPLE SOIL-WASH CYCLES  
W.D. Burch, P. Sosis, Continental Oil Co., Teeterboro, New Jersey

2:50 76. NEW ARTIFICIALLY SOILED CLOTH

Hideaki Kuwamura, Ichiro Kashiwa, Teruo Tsunoda, Lion Fat and Oil Co., Ltd., and Hitachi Central Research Laboratory, Tokyo, Japan

3:10 77. COMPARING PERFORMANCE OF PHOSPHATE AND PHOSPHATE FREE LAUNDRY DETERGENTS

Marvin Mausner, Albert Benson, Joel Schwartz, Witco Chemical Co., Paterson, New Jersey

3:30 78. DETERGENT ALKALI EFFECTS ON THE CORROSION OF GLASS, ENAMELS, CHINA AND METALS

Helmut Weides, Robert W. Linton, Philadelphia Quartz Co., Primos, Pennsylvania

4:00 79. THE DETERGENT BUILDING PROPERTIES OF TRISODIUM CITRATE

D.L. Muck, H.L. Gewanter, Pfizer Chemicals Division, Brooklyn, New York

TUESDAY AFTERNOON—APRIL 25

2:00 P.M.—Garden Room West

SESSION M—GENERAL: OXIDATION OF FATS AND ANTIOXIDANTS

Chairman—Walter Felt, Detergents Inc., Los Angeles, California

2:00 80. STUDIES ON THE TASTE OF THERMALLY OXIDIZED AND OF AUTOXIDIZED SOYBEAN OILS

Riichiro Usuki, Takashi Kaneda, Tohoku University, Sendai, Japan

2:20 81. INERT GAS PACKAGING OF SALAD OILS

W.P. Gipple, Hunt-Wesson Foods, Inc., Fullerton, California

2:40 82. ANTIOXIDATIVE PROPERTIES OF THE OXIDATION PRODUCTS OF TOCOPHEROLS

Yoshiro Abe, Hajime Seino, Shoichiro Watanabe, Kitasato University, Yokohama, Japan

3:00 83. STUDIES OF ALIPHATIC HYDROXYCARBOXYLIC ACIDS AS AN ANTIOXIDANT: THE CORRELATION BETWEEN ANTIOXIDANT ACTIVITY AND CONFIGURATION

Kazuo Honikawa, Shinroku Masuyama, The Osaka Municipal Technical Research Institute, Osaka, Japan

3:20 84. STUDIES ON THE TOXICITY OF AUTOXIDIZED OILS

Nasako Yoshioka, Takashi Kaneda, Tohoku University, Sendai, Japan

3:40 85. STUDY OF THE VEGETABLE OIL FLAVOR COMPONENTS, BY THE AROMAGRAM TECHNIQUE, USING AN ENRICHMENT RECYCLING SYSTEM

A. Uzzan, C. Barbati, C. Bloch, A. Prevot, Institut des Corps Gras, Paris, France

TUESDAY AFTERNOON—APRIL 25

2:00 P.M.—Los Angeles Room

SESSION N—GENERAL: BIOCHEMISTRY

Chairman—James F. Mead, Nuclear Medicine and Radiation Biology, UCLA, Los Angeles, California

2:00 86. ASSOCIATION OF ABO BLOOD GROUPS WITH QUANTITATIVE PLASMA LIPID AND LIPOPROTEIN VARIATION

Joe C. Christian, K.W. Wang, S.W. Cheung, R.J. King, J.P. Lindemann, Indiana University Medical School, Indianapolis

2:20 87. FREE RADICAL ADDITION OF DIALKYL PHOSPHITES TO N, N-DISUBSTITUTED AMIDES OF UNSATURATED FATTY ACIDS AND SCREENING OF THE PRODUCTS FOR ANTI-MICROBIAL ACTIVITY

R.R. Mod, J.A. Harris, J.C. Arthur, Jr., F.C. Magne, G. Sumrell, A.F. Novak, Southern Marketing and Nutrition Research Division, New Orleans, Louisiana

2:40 88. INFLUENCE OF POSITIONAL ISOMERISM OF OCTADECENOATES ON THE SPECIFICITY OF *Geotrichum candidum* LIPASE

Robert G. Jensen, Dennis T. Gordon, Wayne Heimerman, Ralph T. Holman, University of Connecticut, Storrs, and Hormal Institute, Austin, Minnesota

3:00 89. FATTY ACID COMPOSITION OF INDIVIDUAL LIPID CLASSES IN SHEEP RED CELLS AND PLASMA

Gary J. Nelson, Lawrence Livermore Laboratory, Livermore, California

3:20 90. EFFECTS OF ORAL CONTRACEPTIVES ON FREE FATTY ACIDS OF HUMAN CERVICAL MUCUS

Eric J. Singh, Joseph R. Swartwout, Sheila Boss, University of Chicago, Illinois

3:40 91. SOLVENT PARTITIONING OF RAT LIVER LIPIDS

Robert R. Lowry, Ian J. Tinsley, Oregon State University, Corvallis

4:00 92. AN INTERACTION BETWEEN ETHYL ALPHA-PARA-CHLOROPHENOXISOBTYRATE AND ESSENTIAL FATTY ACID NUTRITION

Ian J. Tinsley, Robert R. Lowry, Oregon State University, Corvallis

4:20 93. ESSENTIAL FATTY ACID DEFICIENCY (EFAD) IN MAN: OCCURRENCE, MANIFESTATIONS AND CORRECTION DURING LONG TERM IV FEEDING IN AN INFANT

Haldor T. Johnson, Michael D. Caldwell, Abner H. Levkoff, J. Leo Brueggeman, Medical University of South Carolina, Charleston

WEDNESDAY MORNING—APRIL 26

9:00 A.M.—Golden State Room

SESSION O—SYMPOSIUM: BIOLOGICAL SIGNIFICANCE OF AUTOXIDIZED AND POLYMERIZED OILS (JOINT JOCS-AOCS)

Chairman—I. Hara, University of Tokyo, Japan

Co-chairman—H. Kaunitz, Columbia University, New York City, New York

9:00 94. SEPARATION OF THE TOXIC SUBSTANCE FROM POLYMERIZED OIL

Takashi Kaneda, Takehito Ohfuzi, Tohoku University, Sendai, Japan

9:30 95. UNSATURATED LACTONES: SOME CHEMICAL AND PHYSIOLOGICAL PROPERTIES AND THEIR ROLE IN THE FLAVOR OF DEEP FRIED FOODS

William A. May, Stephen S. Chang, Carnation Research Laboratories, Van Nuys, California and Rutgers University, New Brunswick, New Jersey

10:00 96. STUDIES ON THE BIOLOGICAL EFFECT OF AUTOXIDIZED OILS

Messami Nakamura, Hisako Tanaka, Nakaaki Osawa, Tatsuji Nomura, University of Tokyo, Japan and Central Institute for Experimental Animals, Kawasaki, Japan

10:30 97. POLYMERIZATION INHIBITORS FOR POLY-UNSATURATED OILS

Rex J. Sims, Joseph A. Floriti, Margaret J. Kanuk, General Foods Corporation, White Plains, New York

11:00 98. A NOVEL METHOD FOR THE ESTIMATION OF BIOLOGICAL VALUE OF OXIDIZED OIL

Toshimi Akiya, Chuji Araki, Kiyoko Igarashi, National Food Research Institute, Yamagata, Japan

11:30 99. CHANGES IN RAT HEARTS ASSOCIATED WITH LONG TERM FEEDING OF EIGHT

FRESH AND MILDLY OXIDIZED DIETARY FATS  
H. Kaunitz, R.E. Johnson, Columbia University,  
New York City, New York

WEDNESDAY MORNING—APRIL 26

9:00 A.M.—Garden Room East

SESSION P—GENERAL: CHEMISTRY

Chairman—John Mallory, Purex Corporation, Wilmington,  
California

9:00 100. PREPARATION OF FATTY ACID ESTERS OF  
POLYOL GLUCOSIDES  
R.O. Feuge, J.L. White, Mona Brown, Southern  
Marketing and Nutrition Research Division, New  
Orleans, Louisiana

9:20 101. STUDIES OF THE CYCLIC MONOMER SEP-  
ARATED FROM HEATED METHYL BETA  
ELEOSTEARATE  
Yoshita Masuda, Noboru Matsuo, Seikei Univer-  
sity, Tokyo, Japan

9:40 102. ISOMERIZATION STUDIES I. CONVERSION  
OF LINEAR ACIDS INTO THEIR ISOMERIC  
BRANCHED CHAIN ANALOGUES  
T.A. Foglia, I. Schmelz, G. Maerker, Eastern  
Marketing and Nutrition Research Division, U.S.  
Department of Agriculture, Philadelphia, Penn-  
sylvania

10:00 103. CHLOROPHOSPHONATION OF SUBSTITUTED  
N-ALKANE  
Yoshiki Okamoto, Hiroshi Sakurai, Osaka Uni-  
versity, Osaka, Japan

10:20 104. EVIDENCE FOR CROSS-REACTION IN  
GAMMA-RADIOLYTIC DECARBOXYLATION OF  
CARBOXYLIC ACIDS IN CONDENSED STATES  
Guey-Shuang Wu, David R. Howton, University  
of California, Los Angeles.

10:40 105. HYDROGENATION OF STIGMASTEROL  
Henry W. Kircher, Fumiko U. Rosenstein, Uni-  
versity of Arizona, Tucson

11:00 106. REACTIONS OF CARBON MONOXIDE AND  
UNSATURATED FATTY ACIDS AND DERIVA-  
TIVES. CONVENTIONAL VERSUS SELECTIVE  
HYDROFORMYLATION

J.C. Cowan, E.H. Pryde, E.N. Frankel, Northern  
Utilization Research and Development Division,  
U.S. Department of Agriculture, Peoria, Illinois

WEDNESDAY MORNING—APRIL 26

9:00 A.M.—Los Angeles Room

SESSION Q—SYMPOSIUM: CELL SURFACES

Chairman—Thomas Rosenquist, University of Southern  
California School of Medicine, Los Angeles.

9:00 107. MORPHOLOGY AND DIFFERENTIAL MUCO-  
POLY SACCHARIDE HISTOCHEMISTRY OF  
THE GLYCOCALYX PORTION OF THE PLASMA  
MEMBRANE  
Thomas H. Rosenquist, USC School of Medicine,  
Los Angeles, California.

9:30 108. FUNCTIONAL SIGNIFICANCE OF THE  
MOLECULAR STRUCTURE OF MEMBRANES  
Fritof S. Sjostrand, UCLA, Los Angeles, California

10:00 109. THE ROLE OF THE BASEMENT MEMBRANE  
IN EC COUPLING IN MAMMALIAN MYO-  
CARDIUM  
Joy A. Frank, Glenn A. Langer, UCLA School  
of Medicine, Los Angeles, California

10:30 110. FUSION OF HUMAN RED BLOOD CELL  
MEMBRANES  
Richard F. Baker, USC School of Medicine, Los  
Angeles, California

11:00 111. IN, ON AND AROUND THE CELL  
Jean-Paul Revel, California Institute of Tech-  
nology, Pasadena

WEDNESDAY MORNING—APRIL 26

9:00 A.M.—Garden Room West

SESSION R—ANALYTICAL AND GENERAL

Chairman—Joseph Michaelson, Applied Biological  
Laboratories, Glendale, California

9:00 112. THE DETERMINATION OF MICROAMOUNTS  
OF LEAD IN FATTY OILS, FATTY ACIDS AND  
THEIR DERIVATIVES

Kiyoshi Kamanaka, Chiaki Noguchi, Haruo  
Hirayama, JOCS Committee of Fats and Oil  
Analysis

9:20 113. NMR CHEMICAL SHIFT REAGENTS IN  
STRUCTURAL DETERMINATION OF LIPID  
DERIVATIVES III. METHYL RICINOLEATE  
METHYL 12-HYDROXYSTEARATE AND OTHER  
POLYFUNCTIONAL COMPOUNDS  
John P. Wineburg, Fels Research Institute,  
Temple University, Philadelphia, Pennsylvania

9:40 114. ANALYSIS OF STIGMASTEROL, STIGMAS-  
TANOL, BETA-SITOSTEROL MIXTURES  
Henry W. Kircher, University of Arizona, Tucson

10:00 115. A MICRO METHOD TO GENERATE AND  
COLLECT ODOR CONSTITUENTS FROM  
HEATED COOKING OILS  
E. Selke, W.K. Rohwedder, H.J. Dutton, Northern  
Regional Research Laboratory, Peoria, Illinois

10:20 116. LIPID COMPOSITION OF SELECTED MAR-  
GARINES  
Dorothy L. Carpenter, Hal T. Slover, Human  
Nutrition Research Division, U.S. Department of  
Agriculture, Beltsville, Maryland

10:40 117. RAPID DETECTION OF AFLATOXIN CON-  
TAMINATION IN AGRICULTURAL PRODUCTS  
Walter A. Pons, Alva F. Cucullu, Anthony O.  
Franz, Jr., Louise S. Lee, Leo A. Goldblatt,  
Southern Marketing and Nutrition Research  
Division, New Orleans, Louisiana

11:00 118. NEW CASTOR OIL-BASED URETHANE ELAS-  
TOMERS  
C.K. Lyon, V.H. Garrett, Western Regional Re-  
search Laboratory, Berkeley, California

11:20 119. THE INTERACTION BETWEEN POLYMER AND  
SURFACTANT. THE EFFECT OF POLYMER-  
SURFACTANT COMPLEX ON CRYSTAL HABIT  
OF UREA  
Haruhiko Arai, Shoji Horin, Moriyasu Murata,  
Kao Soap Co., Ltd., Tokyo, Japan

11:40 120. LAUNDERING PRACTICES INFLUENCING THE  
FLAME RETARDANCY OF FABRICS  
J.F. Pacheco, P.P. Carfagno, B.M. Baum, FMC  
Corp., Princeton, New Jersey