

Tentative Technical Program

The following is the tentative technical program for the AOCS-JOCS joint Annual Meeting to be held May 14-18, 1986, in Honolulu, Hawaii. The official program will be distributed to registrants at the meeting. Speakers will be the first author listed, except in those cases in which an asterisk follows the name of a secondary author, indicating he or she will deliver the paper.

Thursday Morning

Surface Chemistry I

Chairman: Michael F. Cox, Vista Chemical Company, Ponca City, Oklahoma

SURFACE CHEMICAL PROCESSES FOR REMOVAL OF SOLID SEBUM SOIL

M.F. Cox, D.L. Smith and G.L. Russell, Vista Chemical Co., Ponca City, OK

SOLUBILIZATION OF N-ALCOHOLS IN MIXED MICELLES

C.M. Nguyen, J.F. Scamehorn* and S.D. Christian, University of Oklahoma, Norman, OK.

THE EFFECT OF SURFACTANT STRUCTURE ON THE RATE OF OIL SOLUBILIZATION INTO AQUEOUS SURFACTANT SOLUTIONS

T.A.B.M. Bolsman and F.T.G. Veltmaat, Koninklijke/Shell Laboratorium, Amsterdam, The Netherlands.

A STUDY ON THE ADSORPTION OF DIALKYL-DIMETHYL AMMONIUM CHLORIDE (PART 2): THE ADSORPTION BEHAVIOR OF DIALKYL-DIMETHYL AMMONIUM CHLORIDE—NONIONIC SURFACTANT SYSTEM

K. Yokoi, H. Sasaki and O. Okumura, Lion Corporation, Japan

NEW AMINE ACID DERIVED SURFACTANTS

K. Sagawa and M. Takehara, Ajinomoto Inc., Japan

SOLUTION PROPERTIES OF MIXED SURFACTANT SYSTEMS

K. Ogino, T. Kakihara, H. Uchiyama and M. Abe, Science University of Tokyo, Japan

STUDIES ON DERIVATIVES OF ALPHA, OMEGA-DIBASIC ACIDS I HOST-GUEST EMULSIONS BY BISGLYCERYL ESTER OF LONG CHAIN ALPHA, OMEGA-DIBASIC ACIDS

M. Takasaga, K. Horikawa, Osaka Municipal Technical Research Institute, and S. Masuyama, Tezukayama Junior College, Japan.

New Oils with Industrial Potential

Chairman: L.H. Princen, USDA Northern Regional Research Center, Peoria, IL

THE STATUS OF MEADOWFOAM (LIMANTHES): DEVELOPMENT OF A NEW INDUSTRIAL OIL-SEED CROP

G.D. Joliff, Oregon State University, Corvallis, OR

PRESENT STATUS OF DOMESTIC HIGH-ERUCIC OILSEED CROPS

E.C. Leonard, Humko Chemical, Memphis, TN; R.L. Haaland, Sun Rise Inc., Auburn, AL; and D. Beatty, Murray State University, Murray, KY

THE COMMERCIALIZATION OF JOJOBA: NEARING THE HORIZON

C.A. Whittaker, Hyder Jojoba Inc., Phoenix, AZ

VERNONIA GALAMENSIS, A PROMISING NEW CROP FOR SEMI-ARID AREAS AND THE TROPICS AND SUBTROPICS

R.E. Perdue Jr., USDA Plant Exploration and Taxonomy Lab, Beltsville, MD

CHINESE TALLOW AS A SPECIALTY OIL CROP: PROGRESS IN DEVELOPMENT

H.W. Scheld, Phyto Resource Research Inc., College Station, TX

CURRENT RESEARCH ON CUPHEA, A NEW MEDIUM-CHAIN FATTY ACID SOURCE

A.E. Thompson, USDA Water Conservation Lab, Phoenix, AZ

Proteins—Nutrition, Health and Disease

Chairman: G. Liepa, Texas Woman's University, Denton, TX

COMPARISON OF SPECIFIC NUTRITIONAL AND METABOLIC PROPERTIES OF COTTON-SEED PROTEIN TO OTHER PLANT AND ANIMAL PROTEINS

M.A. Sullivan-Gorman, Texas Woman's University, Fort Worth, TX, and G.U. Liepa, Texas Woman's University, Denton, TX

THE DEVELOPMENT OF AN ANIMAL MODEL FOR DETERMINING THE EFFECTS OF DIETARY PROTEIN IN CHOLELITHIASIS

J.M. Anderson, N.M. DiMarco, J. Johnson, M.A. Gorman and G. U. Liepa, Texas Women's University, Denton, TX

Meetings

CASEIN-INDUCED HYPERCHOLESTEROLEMIA: POSSIBLE UNDERLYING MECHANISMS

A.C. Beynen, State University, Utrecht, The Netherlands; R. van der Meer, Netherlands University for Dairy Research, and C.E. West, Agricultural University, Wageningen, The Netherlands.

DIETARY FIBERS AND PROTEINS AND THEIR EFFECTS ON CHOLELITHIASIS IN HAMSTERS

N.M. DiMarco, M.J. Liu, P. Lively, M.A. Sullivan, J. Johnson and G.U. Liepa, Texas Woman's University, Denton, TX

IRON BINDING BY COTTONSEED AND SOY PROTEIN

M. Schnepf, P. Johnson, F. Edokpayi and N. DiMarco, Texas Woman's University, Denton, TX

SEPARATION OF SOY TRYPSIN INHIBITORS USING ULTRAFILTRATION

E.C. Baker, USDA Northern Regional Research Center, Peoria, IL

Hazard Identification

Co-chairmen: J. Heilman, Continental Grain Co., New York, NY, and E. Fritz, Union Camp Corp., Savannah, GA

OVERVIEW OF HAZARDS ANALYSIS

P. Baybutt, Battelle Research Institute, Columbus, OH

HAZARD AND OPERABILITY ANALYSIS EXPERIENCE

S.J. Schechter, Rohm & Haas, Bristol, PA

DOW'S FIRE & EXPLOSION INDEX

D.V. Gagliardi, The Dow Chemical Co., Midland, MI

HAZARD CONTROL FOR OILSEED PROCESSING AND REFINING

H.J. Sandvig, Cargill Inc., Minneapolis, MN

HAZARD IDENTIFICATION AND CONTROL IN THE OLEOCHEMICAL INDUSTRY

R.C. Slagel, Union Camp Corp., Savannah, GA

SAFETY IN HYDROGEN MANUFACTURING AND HYDROGENATION PROCESSES

S.N. Milazzo, S.N. Milazzo Associates Inc., Greenville, SC

California, Los Angeles, CA

FREE RADICALS INDUCE LIPID PEROXIDATION AND PROTEIN DEGRADATION BY INDEPENDENT MECHANISMS

K.J.A. Davies, University of Southern California, Los Angeles, CA

MEMBRANE DAMAGE IN ERYTHROCYTES AFFECTED BY RADICALS AND THE EFFECT OF TOCOPHEROL AS A RADICAL SCAVENGER

M. Mino, M. Miki, H. Tamai and H. Yasuda, Osaka Medical College, Takatsuki-city, Japan

FREE RADICAL EXCHANGE REACTIONS BETWEEN VITAMIN E AND VITAMIN C IN HOMOGENOUS AND HETEROGENOUS LIPID SYSTEMS

J. Loliger, F. Ducret, P. Lambelet, F. Saucy and M-C Savoy, Nestec Ltd., Vevey, Switzerland

DAMAGE TO DNA, ENZYMES AND PROTEINS BY LIPID PEROXIDATION AND OTHER OXIDANT REACTIONS

A.L. Tappel, University of California-Davis, Davis, CA

PEROXIDE TONE IN REGULATING EICOSANOID FORMATION

W.E.M. Lands, University of Illinois at Chicago, Chicago, IL

Phytolipids I

Chairman: G. Patterson, University of Maryland, College Park, MD

INHIBITORS OF LIPID BIOSYNTHESIS: POSSIBLE ROLE OF STEROLS IN FATTY ACID DESATURASE ACTIVITY

J.D. Weete, Auburn University, Auburn, AL

ROLE OF STEROLS IN THE DEVELOPMENTAL REGULATION OF FUNGI

W.D. Nes, USDA Plant Development and Productivity Research Unit, Albany, CA

STEROLS AND THE PHYLOGENY OF HIGHER PLANTS

G.W. Patterson, T.S. Salt, S. Xu, University of Maryland, College Park, MD, and J.H. Adler, Michigan Technical University, Houghton, MI

THE PRESENT STATUS OF STEROLS IN MEMBRANES

W.R. Nes, Drexel University, Philadelphia, PA

Biological Oxidation of Lipids I

Chairman: A. Sevanian, University of Southern

Meetings

Analysis of Lipids I

Cochairman: T. Itoh, Kitasato University

EVALUATION OF THERMAL OXIDATION STABILITY FOR FATTY ACIDS

K. Uemura, H. Hirayama, T. Murui, Y. Kubota, J. Kurokawa, H. Sakurada, M. Sonehara, Japan Oil Chemists' Society Fatty Acids Committee, Tokyo, Japan

STUDY ON EVALUATION OF OXIDATIVE STABILITY OF FATS AND OILS

T. Ikeda, K. Uehara and K. Tomita, Shiseido Lab., Yokohama, Japan

POTENTIOMETRIC DETERMINATION OF LIPID PEROXIDES IN VIVO

S. Hara and Y. Totani, Seikei University, Tokyo, Japan

HPLC ANALYSIS OF LIPID PEROXIDES

Y. Totani and S. Hara, Seikei University, Tokyo, Japan

APPLICATION OF TLC-FID CHROMAROD SYSTEM FOR DETERMINATION OF FAT AND OIL PEROXIDES

T. Itoh, H. Kaneko, Kitasato University, Japan; O. Katoh, M. Tanaka and J. Ishii, Iatron Lab, Japan

THERMAL STABILITY OF EPOXY TRIGLYCERIDES

S-P Chang, K.D. Carlson* and J.A. Rothfus, USDA Northern Regional Research Center, Peoria, IL

Thursday Afternoon

Surface Chemistry II

Chairperson: J.P. Wightman, Virginia Polytechnic University, Blacksburg, VA.

NATURE OF THE INTERFACE IN CONTACT WITH A NON-WETTING SOLUTION

A.W. Adamson and R. Massoudi, University of Southern California, Los Angeles, CA

ENHANCEMENT OF HARDNESS AND SALINITY TOLERANCE IN ANIONIC SURFACTANT SOLUTIONS BY ADDITION OF NONIONIC SURFACTANTS

K.L. Stellner and J.F. Scamehorn*, University of Oklahoma, Norman, OK

THE STUDY ON MICELLES OF HOMOGENEOUS NONIONIC SURFACTANTS

K. Meguro, Science University of Tokyo, Japan

ANIONIC POLYMERIC DISPERSANTS

J.R. Wechsler, J. Tacke, and M. O'Reilly, Stepan Company.

COLLOIDAL GAS AND LIQUID APHRONS—A ROLE IN CLEANING AND SCOURING?

D.L. Michelsen, F. Sebba and D. Wallis, Virginia Tech.

NONIONIC SURFACTANT/POLYMER INTERACTIONS

S. Saito, Momotani Juntanken Ltd.

SORPTION OF CATIONIC SURFACTANTS ON VARIOUS TEXTILES

M. Wentz, C. Gradert and L. Olson, University of North Carolina, Greensboro, NC

FORMATION OF W/O/W EMULSIONS DURING THE SIMPLE AGITATION OF OIL-WATER MIXTURES

S. Matsumoto, H. Makino and A. Ueno, University of Osaka, Japan

ACID-BASE CATALYZED HYDROLYSIS REACTIONS ON SODIUM DODECYL SULFATE MICELLES

M. Nakagaki and S. Yokoyama, Kyoto University, Japan

A STUDY ON THE CHEMISTRY OF DODECYLAMINE HYDROCHLORIDE AQUEOUS SOLUTIONS USING THE AMMONIUM ION SELECTIVE ELECTRODE

S. Castro and J.S. Laskowski, University of British Columbia, Vancouver, Canada

Analysis of Lipids II

FOURIER TRANSFORM INFRARED INVESTIGATIONS OF IMMOBILIZED ANTIMICROBIAL AGENTS

J. Blitz, R.S.S. Murthy and D.E. Leyden, Colorado State University, Fort Collins, CO (Potts Award Presentation)

COMPARATIVE PHOSPHORESCENCE AND OPTICALLY DETECTED MAGNETIC RESONANCE STUDIES OF SERUM ALBUMIN BINDING TO FATTY ACIDS

S-Y Mao and A.H. Maki, University of California at Davis, Davis, CA

COMPOSITION OF MIXED OCTADECADIENATES VIA OZONOLYSIS, CHROMATOGRAPHY AND SOLUTION OF LINEAR EQUATIONS

H.J. Dutton, S.B. Johnson, F.J. Pusch, R.T. Holman, A.C. Beckwith, M.S.F. Lie Ken Jie and F.D. Gunstone, The Hormel Institute, Austin, MN

ANALYSIS OF SERUM LIPOPROTEIN BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

I. Hara, Toyo Soda Mfg. Co., Hayakawa Ayase-

Meetings

shi, Japan; M. Okazaki, A. Tanaka, K. Shima, Y. Nakajo and N. Komoriya, Tokyo Medical and Dental University, Japan

HYDROCARBON CAROTENOID PROFILES OF PALM OIL PROCESSED FRACTIONS

B. Tan, C.M. Grady and A.M. Gawienowski*, University of Massachusetts, Amherst, MA

QUANTITATIVE ANALYSIS OF AMINOPHOSPHOLIPIDS USING A PRECOLUMN FLUORESCENT LABELING METHOD BY HPLC

Y. Machida, Y. Ota, T. Kaneko* and H. Watanabe, Showa Sangyo Co. Ltd., Chiba, Japan

IMPROVED ANALYSIS OF TOCOPHEROLS IN USED FRYING FATS AND OILS

P.R. Bross and M.P. Purdon, Procter & Gamble Co., Cincinnati, OH

CARBON-13 NMR STUDY OF 1,3-BENZODIOXOL-5-OL (SESAMOL), A NATURALLY OCCURRING ANTIOXIDANT

D.A. Rosie and P.A. Hailey, South Bank Polytechnic, London, England

HIGH-SPEED LIQUID CHROMATOGRAPHY AS APPLIED TO OILS AND FATS ANALYSIS

V.K.S. Shukla, Aarhus Oliefabrik a/s, Aarhus, Denmark

Quality Aspects in the Use of Fats

Chairpersons: K. Warner, USDA Northern Regional Research Center, Peoria, IL, and E.G. Perkins, University of Illinois, Urbana, IL

A UNIQUE PAPER STRIP WHICH MEASURES FREE FATTY ACID LEVELS IN FRYING SHORTENING

J.W. Mlinar, 3M Co., St. Paul, MN

METHOD TO PREDICT THE OXIDATIVE STORAGE STABILITY OF WHOLE MILK POWDER

A.R. Keen, New Zealand Dairy Research Institute, Palmerston North, New Zealand

METHODS TO ANALYZE DIFFERENT TYPES OF POLYMERS

A.T.G. Steverink and J.K. Waltmann, COVP Het Spelderholt, Beekbergen, The Netherlands

VOLATILE OXIDATION PRODUCTS IN OILS AND FATS TO BE USED IN POULTRY FEED—A PARAMETER TO PREDICT "OFF-FLAVORS"

A.T.G. Steverink and H. Steunenberg, COVP Het Spelderholt, Beekbergen, The Netherlands

THE QUALITATIVE EFFECTS OF PHOSPHO-

LIPIDS ON THE FLAVOR STABILITY OF SOYBEAN OIL

S.H. Yoon and D.B. Min, Ohio State University, Columbus, OH

SENSORY AND GAS CHROMATOGRAPHY TECHNIQUES TO EVALUATE THE STABILITY OF OILS

P.L. Pinkowski, K.B. Witherly, C.D. Harvey and V.A. Tadjalli, Calreco, Van Nuys, CA

DETERMINATION OF SOYBEAN OIL VOLATILES BY PURGE-AND-TRAP/CAPILLARY GAS CHROMATOGRAPHY

M.S. Fraser, S.W. Eubanks and A. Khayat, Beatrice Grocery Group, Fullerton, CA

VOLATILE COMPONENT ANALYSIS OF FATS AND OILS

E.G. Perkins and D. Hendren, University of Illinois, Urbana, IL; V. Ducruet, INRA, Dijon, France; and M. Jablonsky, University of Wisconsin, Madison, WI

NEW METHODOLOGY TO EVALUATE QUALITY OF SOYBEANS STORED AT DIFFERENT MOISTURE LEVELS

E.N. Frankel, A.M. Nash, J.M. Snyder and L.T. Black, USDA Northern Regional Research Center, Peoria, IL

EFFECTS OF THERMAL TEMPERING, STORAGE DAMAGE AND LOW LIPOXYGENASE (L-1) ACTIVITY ON QUALITY OF CRUDE SOYBEAN OIL

K. Warner, E.N. Frankel and K.J. Moulton, USDA Northern Regional Research Center, Peoria, IL

ISOMERIC LINOLENIC ACIDS IN PARTIALLY HYDROGENATED SOYBEAN OIL

E.G. Perkins, University of Illinois, Urbana, IL, and C. Smick, Land O'Lakes Inc., Minneapolis, MN

LOCALIZATION OF LIPOXYGENASE IN GERMINATING SOYBEAN (GLYCINE MAX. [L:])

Y-S Song, M.H. Love, P.A. Murphy and D. Resurreccion, Iowa State University, Ames, IA

DISCRIMINATION BETWEEN OXIDATION AND MAILLARD BROWNING BY MEANS OF PHOSPHOLIPID-DERIVED FLUORESCENCE IN MODEL SYSTEMS AND FOOD

W.L. Porter, E.D. Black, Y-K Kim, L. Hoke and J.G. Kapsakis, U.S. Army Natick R&D Center, Natick, MA

Industrial Applications of Oils

Chairperson: D. Taylor, Harshaw/Filtrol Partner-

Meetings

ship, Beachwood, OH

CONSIDERATIONS ON THE DESIGN OF A WASTE WATER FREE EXTRACTION PLANT AND REFINERY

K. Weber

IMPROVED SULFONATION PLANT POLLUTION CONTROL VIA SECOND GENERATION ELECTROSTATIC PRECIPITATOR

B. Brooks, Chemithon Corp., Seattle, WA

SOME ASPECTS OF POLYVINYL CHLORIDE HEAT STABILIZER BY COPOLYMER OF ISOCYANATE AND EPOXY FISH OIL CONTAINING HYDROXYL GROUP

M. Sonehara and H. Tawada*, Miyoshi Oil & Fat Co. Ltd., Kobe, Japan

NEW APPLICATIONS OF ACETYLATED MONOGLYCERIDES

K. Murakawa and T. Kubozuka*, Riken Vitamin Co. Ltd., Tokyo, Japan

THERMAL STUDIES ON POLYMORPHIC BEHAVIORS OF UNSATURATED FATTY ACIDS—PALMITOLEIC, ERUCIC, LINOLEIC AND LINOLENIC ACIDS

M. Suzuki, Nippon Oil and Fats Co. Ltd., Amagasaki, Japan, and K. Sato, Hiroshima University, Fukuyama, Japan

IDENTIFICATION AND QUANTITATION OF ANTIOXIDANTS IN LUBRICANTS BY TLC, UV SPECTROPHOTOMETRY AND HPLC

T. Sangai, T. Saito and K. Musha, Asahi Denka Kokgyo K.K., Tokyo, Japan

A NEW OIL REFINING PROCESS

H. Watanabe, K. Aonuki, T. Mizuno*, M. Watanabe and T. Arima, Showa Sangyo Co. Ltd., Chiba, Japan

MODIFICATION OF FATS AND OILS FOR ALTERNATIVE FUELS AND CHEMICALS

K.D. Carlson, USDA Northern Regional Research Center, Peoria, IL

IGNITION PRECURSORS IN DIESEL TYPE INJECTION SPRAYS OF VEGETABLE OILS

T.W. Ryan III and T.J. Callahan, Southwest Research Institute, San Antonio, TX, and M.O. Bagby, USDA Northern Agricultural Research Center

A COMPARISON OF QUALITY PARAMETERS FOR ANIMAL FAT FROM DIFFERENT RENDERING PROCESSES

H. Holst-Pedersen, Copenhagen, Denmark

ENVIRONMENTAL PERMITTING AND FACILITIES FOR A NEW FATTY CHEMICALS PLANT

M.J. Boyer and M.E. Burman, Applied Engineering and Science, Chamblee, GA, and R.E. Burke, Resinall Inc.

Biological Oxidation of Lipids II

Chairman: A. Sevanian, University of Southern California, Los Angeles, CA

LIPID PEROXIDATION IN PLANTS—PRODUCTS AND PHYSIOLOGICAL ROLES

D.C. Zimmerman and B.A. Vick, USDA Agricultural Research Service, Fargo, ND

GC-MS METHODS FOR MEASUREMENT OF PHOSPHOLIPID AND TRIGLYCERIDE PEROXIDATION PRODUCTS IN TISSUES: EXAMPLES FROM RETINA AND OTHER TISSUES

E. van Kuijk, University of Nijmegen, Nijmegen, The Netherlands

CYTOCHROME P-450 AND THE OXYGENATED METABOLISM OF ARACHIDONIC ACID

J. Capdevila, G.D. Snyder and J.R. Falck, University of Texas Health Science Center, Dallas, TX

PEROXIDATIVE ALTERATION OF MEMBRANE STRUCTURE AND INCREASE PHOSPHOLIPASE A₂ HYDROLYSIS

A. Sevanian, University of Southern California, Los Angeles, CA

SPECTROPHOTOFUOROMETRIC AND MICROSCOPIC STUDY OF AGE-RELATED FLUORESCENT SUBSTANCE (LIPOFUSCIN) IN RAT TISSUES

H. Shimasaki and N. Ueta, Teikyo University School of Medicine, Tokyo, Japan

Phytolipids II

Chairman: G. Patterson, University of Maryland, College Park, MD

CURRENT CONCEPTS ON FATTY ACID BIOSYNTHESIS

P.K. Stumpf, University of California-Davis, Davis, CA

CHLOROPLAST LIPID METABOLISM

J.B. Mudd, ARCO Plant Cell Research Institute, Dublin, CA

REGULATION OF PHOSPHOLIPID SYNTHESIS

T.S. Moore Jr., Louisiana State University, Baton Rouge, LA

LIPIDS AND PLANT DISEASE RESISTANCE

Meetings

J. Kuc and M. Zook, University of Kentucky,
Lexington, KY

MOLECULAR MECHANISMS OF LIPID COMPOSITIONAL CHANGE DURING THE ACCLIMATION OF PLANTS TO CHILLING TEMPERATURES

G.A. Thompson Jr., University of Texas, Austin,
TX

Proteins—Texturization of Oilseed Proteins

Cochairpersons: A. Chen, 3I Corp., Plano, TX, and
K. Saio, National Food Research Institute, Ibaraki,
Japan

THE APPLICATION OF NEW EXTRUSION PROCESSING METHODS OF TEXTURED VEGETABLE PROTEIN PRODUCTION

J.P. Kearns, Wenger International Inc., Kansas
City, MO

STUDIES ON THE PROCESSABILITY OF SOYA PROTEIN AND ITS RHEOLOGICAL PROPERTY

I. Hayakawa and N. Hayashi, Kyushu University,
Fukuoka city, Japan

EXTRUSION COOKING IN HIGH MOISTURE: MEAT ANALOGUE FROM DEFATTED SOY FLOUR WITH TWIN SCREW EXTRUDER

A. Noguchi, National Food Research Institute,
Ibaraki, Japan; L. Jae-Kag, Korea University,
Korea; and S. Wakamiya, Mitsubishi Heavy
Industries Ltd., Japan

MICROSTRUCTURAL INVESTIGATION ON TEXTURIZED SOY PROTEIN PRODUCT

S. Gwiazda, Agricultural University of Warsaw,
Warsaw, Poland; A. Noguchi and K. Saio*,
National Food Research Institute, Ibaraki, Japan

RESEARCH ON EXTRUSION COOKING OF TOFU BY USE OF TWIN SCREW EXTRUDER

Y. Akiyama, S. Yoshihashi and I. Sakauchi, Kyodo
Milk Industry Co. Ltd., Tokyo, Japan

THE APPLICATION OF TEXTURIZED PROTEINS IN VEGETARIAN FOOD SYSTEMS

R.S. Leiss, Worthington Foods Inc., Worthington,
OH

TEXTURED WHOLE SOYBEAN PRODUCT: ITS PROPERTIES AND APPLICATION

T. Harada, H. Shiga, K. Ohata, Kobe Women's
University, Kobe, Japan; M. Mukaiyama and S.
Sato, Asahimatsu Foods Inc., Japan

EFFECT OF SOY PROTEIN SOLUBILITY ON EMULSION CURD CONFORMATION

H. Tenmyo, T. Gomi, T. Tsuchiya and K. Baba,

Ajinomoto Co. Inc., Kawasaki, Japan

PRODUCTION OF EXPANDED FOODS FROM SOY PROTEIN EMULSION

M. Terashima, K. Mashima, T. Nagata, T. Kata-
yama and H. Taniguchi, Fuji Oil Co. Ltd., Osaka,
Japan

PROPERTIES OF MILK ANALOGUES WITH SOYBEAN PROTEINS AND CHEESE WHEY

V.H. Holsinger, USDA Eastern Regional Research
Center, Philadelphia, PA

Friday Morning

Frying Fats

CHEMICAL ANALYSIS OF VEGETABLE OILS OBTAINED FROM COMMERCIAL FRYING PROCESSES

J.L. Sebedio, C. Septier, J. Prevost and A.
Grandgirard, I.N.R.A., Dijon, France

TOXICOLOGICAL EFFECTS OF CYCLIC FATTY ACID MONOMERS ISOLATED FROM HEATED LINSEED OIL ON RATS DURING REPRODUCTION

R. Grandgirard, J.L. Sebedio*, J. Prevost, C.H.
Septier and F. Juliard, I.N.R.A., Dijon, France

NUTRITIONAL STUDIES OF VEGETABLE OIL USED IN A PRESSURE FRYER

J.C. Alexander, B.E. Chanin and V.E. Valli,
University of Guelph, Guelph, Ontario, Canada

EFFECT OF ALTERED FATTY ACID COMPOSITION ON STABILITY OF SOYBEAN OIL

T.L. Mounts, K. Warner, G.R. List and R.
Kleiman, USDA Northern Regional Research
Center, Peoria, IL

FORMATION OF MONOMERIC CYCLIC FATTY ACIDS DURING HEATING OF PARTIALLY HYDROGENATED SOYBEAN OIL

J. Rojo and E.G. Perkins*, University of Illinois,
Urbana, IL

EFFECTS OF THERMAL OXIDATION ON THE CONSTITUTION OF BUTTERFAT, BUTTERFAT FRACTIONS AND CERTAIN VEGETABLE OILS

D.B. Kupranycz, M.A. Amer and B.E. Baker,
McGill University, Ste Anne de Bellevue, Quebec,
Canada

EFFECT OF THERMALLY OXIDIZED COMPOUNDS ON THE FLAVOR STABILITY OF SOYBEAN OIL

S.H. Yoon and D.B. Min, Ohio State University,
Columbus, OH

THE STABILITY OF LOW LINOLEIC ACID

Meetings

H. Traitler, H.J. Wille and A. Struder, Nestec Ltd., Vevey, Switzerland

EXTRUSION OF COTTONSEED AND SOYBEAN IN PREPARATION FOR SOLVENT EXTRACTION

J.T. Farnsworth, T. Wondrafrash, J.P. Wagner, Texas A&M University, College Station, TX, and L.A. Johnson, Iowa State University, Ames, IA

POSSIBILITY OF USE OF ENZYMES IN OIL EXTRACTION

K. Sosulski, E. Coxworth, Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada, and F.W. Sosulski, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

SUNFLOWERSEED OIL EXTRACTION WITH ETHANOL

M.A.B. Regitano-d'Arce and U. de Almeida Lima, Esc. Sup. Agric. Luiz de Queiroz, Sao Paulo, Brazil

FRACTIONATION OF SOFT COCOA BUTTER

H. Traitler, A. Dieffenbacher and P. Ducret, Nestec Ltd., Vevey, Switzerland

APPLIED TECHNIQUES FOR ASSESSING THE POTENTIAL OF PROCESSING COMMERCIALY IMPORTANT COMPOUNDS VIA SUPERCRITICAL EXTRACTION

W.G. Engelhart, Milton Roy Company, Ivyland, PA

THE FRACTIONATION OF FATTY ACIDS AND TRIGLYCERIDES BY SUPERCRITICAL EXTRACTION

T.E. Boland, R.J. Robey, S. Sunder

MODELING THE SOLVENT EXTRACTION OF OILSEEDS

G. Abraham, R. Hron and S. Koltun, USDA Southern Regional Research Center, New Orleans, LA

Biological Oxidation of Lipids III

Chairman: A. Sevanian, University of Southern California, Los Angeles, CA

LIPID PEROXIDATION AND CHEMILUMINESCENCE IN ANIMAL TISSUES

T. Miyazawa, K. Fujimoto, Tohoku University, Sendai, Japan, and T. Kaneda, Koriyama Women's University, Japan

LIPID PEROXIDES AS AGENTS CAUSING ATHEROGENESIS

K. Yagi, Institute of Applied Biochemistry, Gifu, Japan

PARACRINE AND CLASTOGENIC ACTION OF

OXIDATIVE METABOLITES OF ARACHIDONIC ACID IN TUMOR PROMOTION

P.E. Cerutti, Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland

INHIBITION OF PEROXIDATIONS OF LIPO-SOMAL- AND BIO-MEMBRANES BY WATER SOLUBLE ANTIOXIDANTS

E. Niki, Y. Yamamoto and Y. Kamiya, University of Tokyo, Tokyo, Japan

DRUGS, LIPID PEROXIDATION AND GLUTATHIONE STATUS OF MOUSE LIVER

A. Wendel, H. Jaeschke and C. Kleinwachter, University of Tubingen, Tubingen, West Germany

Role of Lipids in Cancer I

Chairpersons: R. Alfin-Slater, J. Mead, University of California at Los Angeles, Los Angeles, CA, and E. Araki, National Cancer Center Hospital, Tokyo, Japan

GLYCOSPHINGOLIPIDS OF CULTURED PC12 PHEOCHROMOCYTOMA CELLS

R.K. Yu, T. Ariga, L.J. Macala, M. Saito, Yale University School of Medicine, New Haven, CT; R.K. Margolis, State University of New York Downstate Medical Center; L.A. Greene and R.U. Margolis, New York University Medical Center

ACIDIC GLYCOSPHINGOLIPID, GANGLIOSIDE GM3, CAN INDUCE SPECIFICALLY MONOCYTIC DIFFERENTIATION IN HUMAN MYELOID AND MONOCYTOID LEUKEMIA CELL LINES, HL-60 AND U937

M. Saito and H. Nojiri, Jichi Medical School, Japan

TUMOR-ASSOCIATED GLYCOLIPID ANTIGENS WITH SIALIC ACIDS AS IMMUNOGENIC DETERMINANT

Y. Hirabayashi, M. Matsumoto, Shizuoka College of Pharmacy, Shizuoka, Japan, and H. Higashi, Osaka University, Osaka, Japan

MEMBRANE FATTY ACYL MODIFICATION IN TUMOR CELLS: A POTENTIAL THERAPEUTIC APPROACH

A.A. Spector and C.P. Burns, University of Iowa, Iowa City, IA

ROLE OF POLYUNSATURATED FATTY ACIDS IN PARENTERAL HYPERALIMENTATION OF CANCER PATIENTS

Y. Mashima, T. Tashiro, H. Yamamori, H. Misawa, K. Hayashida, K. Horibe, Chiba University, Chiba, Japan; M. Kunimasa, K. Okamoto, T. Takai and T. Wakabayashi, Terumo Co., Tokyo, Japan

Meetings

Nonionics—Versatile Surfactants for Household and Industry

Chairmen: Helmut Stupel, Shell Chemical Co., Houston, TX, and Mitsuo Okahara, University of Osaka, Osaka, Japan

NONIONIC SURFACTANTS IN U.S. LAUNDRY DETERGENTS

J.L. Lynn Jr., Lever Brothers, United States

ALKYLETHOXYLATES—AN ASSESSMENT OF THEIR TOTAL SAFETY—ALONE AND IN MIXTURES

T.B. Zerkle, J.F. Ross and B.E. Domeyer, Procter & Gamble, United States

DETERGENCY OF NONIONIC SYSTEMS—IS IT RELATED TO PHASE INVERSION TEMPERATURE?

H.L. Benson, Shell Development, United States

NONIONIC ALKYL POLYGLYCOSIDES—UNIQUE SURFACTANTS

N.F. Borys, A.D. Urfer and G.M. Verboom, Staley Manufacturing Co., United States

A COMPARISON OF BLOCK CO-POLYMER SURFACTANT GELS

I.R. Schmolka, Irving R. Schmolka Inc., United States

PHYSICAL PROPERTIES OF POLYOXYETHYLENE POLYGLYCERINE ALKYLPHENYLETHER

Y. Tanizaki, A. Suginaka and S. Akimoto, Nippon Oil and Fats Co. Ltd., Japan

PREPARATION AND PROPERTIES OF (LONG-CHAIN ALKYL) OLIGO(OXYETHYLENE)-OXYACETOHYDROXAMIC ACIDS

M. Okahara, A. Masuyama, K-I Akiyama, Osaka University, Japan

ENZYMATICALLY MODIFIED PROTEINS AS NEW SURFACTANTS: THEIR PROPERTIES AND FUNCTIONS

S. Arai, University of Tokyo, Japan

STABILIZING EFFECT OF MULTI-BRANCHED NONIONIC SURFACTANTS ON COM

T. Sugiyama and A. Naka, Dai-Ichi Kogyo Seiyaku Co. Ltd., Japan

Friday Afternoon

Sequestrants

Chairman: M. Tuvell, Ethyl Corporation, Baton Rouge, LA

THE FUNCTIONALITIES OF POLYMERS IN DETERGENT FORMULATIONS

G.T. McGrew, Alcolac Chemical Corporation

EFFECT OF WATER HARDNESS ION CONTROL ON SURFACTANT FOAMS

P.C. Hu and M.E. Tuvell, Ethyl Corporation, Baton Rouge, LA

ZEOLITE AND PHOSPHATE: ADDRESSING FUNCTIONAL DIFFERENCES TO ACHIEVE PERFORMANCE PARITY

R.T. Coffey and S.L. Rock, The PQ Corporation

AN IMPROVED METHOD FOR EVALUATING DETERGENT BUILDERS FOR WATER HARDNESS CONTROL

J.E. McDonell and G. Liu, Economics Lab

Surfactants and Detergents Analytical

Chairman: M.F. Cox, Vista Chemical Co., Ponca City, OK

THE RAW MATERIAL, FINISHED PRODUCT AND DUST PAD ANALYSIS OF DETERGENT PROTCASES USING A SMALL SYNTHETIC SUBSTRATE

T.M. Rothgeb, P.H. Garrison, L.A. Smith and M.G. Venegas, Procter & Gamble Co.

THE DETERMINATION OF HLB VALUE BY HPLC

J. Shovan and T. Shuzhi, Research Institute of Petroleum Exploration and Development, China

THE ANALYSIS OF ETHANOL AMINES IN AIR BY ION CHROMATOGRAPHY

J. Goelz and A. Zembrod, Drackett Co.

RAPID QUANTITATIVE HPLC ANALYSIS OF POLYETHOXYLATED NONIONICS

H. Yoshimura, et al, Lion Corporation, Japan

Analysis of Lipids IV

HPLC OF ETHOXYLATED FATTY ACID DERIVATIVES

L. Yodual and G. Szajer*, Akzo Chemie America, McCook, IL

CHROMATOGRAPHIC ANALYSIS OF MONO-ACYLGLYCEROLS

Y. Itabashi and T. Takagi, Hokkaido University, Minato-cho, Hakodate, Japan.

DISTRIBUTION OF HEXADECENOIC, OCTADECENOIC AND OCTADECADIENOIC ACID ISOMERS IN HUMAN TISSUE LIPIDS

R.O. Adlof and E.A. Emken, USDA Northern Regional Research Center, Peoria, IL

Meetings

HPLC ANALYSIS OF SOYBEAN PHOSPHOLIPIDS

K. Shimbo, M. Shimazaki* and N. Taguchi, Sugiyama Chemical and Industrial Laboratory, Yokohama, Japan

APPLICATIONS OF SILVER RESIN CHROMATOGRAPHY: THE FRACTIONATION OF FISH OILS AND OTHER POLYUNSATURATED FATS

R.O. Adlof, USDA Northern Regional Research Center, Peoria, IL

QUANTITATIVE DETERMINATION OF MEDIUM CHAIN TRIGLYCERIDES IN INFANT FORMULA BY REVERSE PHASE HPLC

T.W. Lee, Ross Laboratories, Columbus, OH

SYNTHESIS AND HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC SEPARATION OF 1-ALKYL-2-ACYL-SN-GLYCEROLS

T. Iwama, Nippon Oil and Fats Co. Ltd., USDA Eastern Regional Research Center, Philadelphia, PA, and T.A. Foglia, USDA Eastern Regional Research Center

ANALYSIS OF CYCLOPROPENE FATTY ACIDS IN COTTON BY HPLC

R. Wood, Texas A&M University, College Station, TX

THERMAL AND COMPOSITIONAL PROPERTIES OF COCOA BUTTER DURING STATIC CRYSTALLIZATION

P.S. Dimick, Pennsylvania State University, University Park, PA, and D.M. Manning, M&M Mars Inc., Elizabethtown, PA

O. Suzuki and T. Yokochi, National Chemical Laboratory for Industry, Tsukuba, Ibaraki, Japan

PRODUCTION OF EPA BY FRESHWATER UNICELLULAR ALGAE

H. Iwamoto and S. Sato, Meiji University, Kawasaki, Japan

SOYBEAN SOAPSTOCK FERMENTATION

C.W. Hesseltine, USDA Northern Regional Research Center, Peoria, IL

BIOCHEMICAL MODIFICATION OF FATS BY MICROORGANISMS

S. Koritala, C.W. Hesseltine, E.H. Pryde and T.L. Mounts, USDA Northern Regional Research Center, Peoria, IL

EFFECT OF NATURAL LACTIC ACID FERMENTATION AND SELECTED BACTERIA ON NUTRITIONAL VALUE OF CEREAL AND LEGUME MEALS

M. Fields, University of Missouri, Columbia, MO

RECENT ADVANCES IN CUCUMBER FERMENTATION

H.P. Fleming, USDA-ARS, North Carolina State University, Raleigh, NC

SOLID STATE FERMENTATION TO PRODUCE THE EDIBLE MUSHROOMS AND ANIMAL FODDER

K. Sosulski and E. Coxworth, Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada

Proteins—Fermentation

Cochairpersons: C.W. Hesseltine, USDA's Northern Regional Research Center, Peoria, IL, and H. Iwamoto, Meiji University, Japan

MICROBIAL ENVIRONMENTS IN SOLID SUBSTRATE FERMENTATIONS

R.E. Mudgett, University of Massachusetts, Amherst, MA

INTERESTERIFICATION OF TRIGLYCERIDE BY MICROBIAL LIPASE

S. Yamanaka and T. Tanaka, Ajinomoto Co. Inc., Kawasaki, Japan

HETEROGENEOUS BIOREACTORS FOR LIPIDS DERIVATIVE SYNTHESIS

Y. Tanaka, J. Hirano and T. Funada, Nippon Oil & Fats Co. Ltd., Tsukuba, Ibaraki, Japan

PRODUCTION OF GAMMA-LINOLENIC ACID BY FUNGI

Processing of Oils II

DEGUMMING AND NEUTRALIZING METHODS FOR VEGETABLE AND ANIMAL OILS AND FATS

C. Zehnder, Alfa-Laval, Louisville, KY

INTERESTERIFICATION OF FAT DURING PHYSICAL REFINING

T. Izumi, N. Sagi and H. Mori, Fuji Oil Co. Ltd., Osaka, Japan

EFFECTS OF PHOSPHOLIPID CONTENT ON REFINED SOYBEAN OIL QUALITY

C.B. Ungermann and D.R. Taylor, Harshaw/Filtrol Partnership, Pleasanton, CA

PHOSPHORUS AND TRACE METAL REMOVAL WITH A NOVEL REFINING METHOD

W.A. Welsh and J.M. Bogdanor, W.R. Grace & Co., Columbia, MD

NEW PRODUCTS VIA ADSORPTIVE SEPARA-

Meetings

TIONS

S.A. Gembicki and K.U. Johnson, UOP Inc., Des Plaines, IL

BLEACHING CLAYS

A. Maza, Best Foods, Union, NJ

PROCESSING AND HANDLING FACTORS THAT LEAD TO CORN OIL DEGRADATION AND RESULTING CHEMICAL CHANGES

R.D. Sinram and F.T. Orthoefer, A.E. Staley Co., Decatur, IL

PALADIUM(II)-CHLORIDE AS A HOMOGENEOUS CATALYST FOR SELECTIVE HYDROGENATION

J.A. Heldal, Norwegian Herring Oil and Meal Industry Research Institute, Bergen, Norway

Biological Oxidation of Lipids IV

Chairman: A. Sevanian, University of Southern California, Los Angeles, CA

PEROXIDATION OF UNSATURATED FATTY ACIDS IN LIPOSOMAL MEMBRANES

J. Sunamoto, Nagasaki University, Nagasaki, Japan

LIPID PEROXIDATION IN CELL PROLIFERATION AND DIFFERENTIATION

D.G. Cornwell, H. Zhang, E.C. Downs and R.L. Whisler, The Ohio State University, Columbus, OH

THE NEURONAL CEROID-LIPOFUSCINOSES: NEW BIOCHEMICAL FINDINGS

A.N. Siakotos, R. Bray, Indiana University School of Medicine, Indianapolis, IN; A. Sevanian, University of Southern California, Los Angeles, CA; and N. Koppang, Norwegian Veterinary Institute, Oslo, Norway

FORMATION OF OXIDIZED CHOLESTEROL PRODUCTS IN LIPOSOMES AND *IN VIVO* PEROXIDATIONS

G-S Wu, R.A. Stein and J.F. Mead, University of California-Los Angeles, Los Angeles, CA

MECHANISMS OF LIPID PEROXIDATION INDUCED BY QUINONE AND QUINOID ANTICANCER DRUGS

H. Nakano-Totsune and M. Nakano, Gunma University, Gunma, Japan

Role of Lipids in Cancer II

Chairpersons: R. Alfin-Slater, J. Mead, University

of California at Los Angeles, Los Angeles, CA, and E. Araki, National Cancer Center Hospital, Tokyo, Japan

UNUSUAL UNSATURATED FATTY ACIDS IN HUMAN HEPATOCELLULAR CARCINOMA

N. Okazaki, E. Araki and K. Oda, National Cancer Center Hospital, Tokyo, Japan

CALORIC RESTRICTION AND EXPERIMENTAL CARCINOGENESIS IN RATS

D. Kritchevsky, M.M. Weber, C.L. Buck and D.M. Klurfeld, The Wistar Institute, Philadelphia, PA

EARLY EVENTS: CHANGES IN HOST METABOLISM PRECEDING TUMOR GROWTH

R. Wood, Texas A&M University, College Station, TX

ABNORMALITIES IN LIPID METABOLISM IN CANCER: AN *IN VITRO* MODEL FOR LIPID MOBILIZATION

P.F. McAndrew, S. Kitada, J.F. Mead and E. Hays, University of California-Los Angeles, Los Angeles, CA

CHARACTERIZATION OF LIPID MOBILIZING FACTORS (LMF) FROM MURINE MALIGNANT T-LYMPHOMA CELL LINES

S. Kitada, B. Guthrie, P. McAndrew, M.E. Elepano, E.F. Hays, J.F. Mead and J.R. Reeve Jr., University of California-Los Angeles, Los Angeles, CA

LIPIDS AND CANCER: A COMMENTARY

R.B. Alfin-Slater, University of California-Los Angeles, Los Angeles, CA

Edible Oils

SPECIFIC APPLICATION OF PALM KERNEL OIL IN THE FOOD INDUSTRY

K.G. Berger and M.S.A. Kheiri, Palm Oil Research Institute of Malaysia, Kuala Lumpur, Malaysia.

NUTRITIONAL IMPACTS OF OILS AND FATS CONSUMPTION TRENDS IN DEVELOPED AND DEVELOPING COUNTRIES.

S.H. Fatemi, Iranian Research Organization of Science and Technology, Tehran, Iran

EFFECT OF FOOD EMULSIFIERS IN FLUID SHORTENING ON THE ONE-STAGE MIXING OF CAKE MAKING

N. Matsui, Nijima Gakuen Women's Junior College, Takasaki-city, Japan

RHEOLOGY OF WHIPPED TOPPING IN RELATION TO LIPID-PROTEIN INTERACTIONS

N. Krog, Grindsted Products A/S, Brabrand,

Meetings**Denmark****A COCOA BUTTER EQUIVALENT FROM SHOREA ROBUSTA FAT**

K. Itagaki and S. Maruzeni, Asahi Denka Kogyo K.K., Tokyo, Japan

THE EFFECT OF MICROWAVE TEMPERING SYSTEM

H. Hoshino, H. Sasaki, K. Marusugi, M. Sano and T. Saotome*, Miyoshi Oil & Fat Co. Ltd., Kobe, Japan

MICROSTRUCTURE AND INTERACTIONS OF DISPERSED SOY LECITHIN IN MILK

W. Buchheim, A. Wiechen, D. Prokpek and A. Funke, Federal Dairy Research Centre, Kiel, West Germany

INTERACTION BETWEEN AMYLOPECTIN AND MONOGLYCERIDES IN MODEL SYSTEMS IN RELATION TO BREADMAKING CONDITIONS

L.R. Batres and P.J. White, Iowa State University, Ames, IA

BEEF LIPID DEGRADATION IN STEW WITH AND WITHOUT VEGETABLES

S.L. Melton, M.J. Han*, M.J. Riemann and F.A. Draughon, University of Tennessee, Knoxville, TN

A NEW METHOD FOR FATTY ACID-SUGAR ESTER SYNTHESIS AND PURIFICATION

S.C. Kea and C.E. Walker, University of Nebraska, Lincoln, NE

Saturday Morning**Surfactant Performance and Evaluation**

Chairman: T.P. Matson, Vista Chemical Co., Ponca City, OK

PROPERTIES OF A SERIES OF SIMPLE ALKYL-CAPPED ALCOHOL ETHOXYLATES

T.R. Oakes and R.W. Keppers, Economics Lab

INSTRUMENTAL METHODS FOR EVALUATING STATIC CONTROL IN LAUNDRY

M.G. Tiede, Amway Corporation

FORMULATING CHARACTERISTICS OF HIGH AND LOW 2-PHENYL LINEAR ALKYL BENZENE SULFONATES IN LIQUID DETERGENTS

J.C. Drozd, Stepan Co.

DETERGENCY AND FOAMING PROPERTIES OF ALKYL POLYGLYCOSIDE SURFACTANTS

G.M. Verboom, A.D. Urfer and A.H. Malik, A.E. Staley Manufacturing Co.

INFLUENCE OF UNSULFONATED MATTER COMPOSITION ON THE PHYSICAL PROPER-**TIES OF LINEAR ALKYL BENZENE SULFONATE SLURRIES**

J.L. Berna, Petrasc

CONSIDERATIONS ON THE EFFECTS OF LIPASES AT WASHING CONDITIONS

E. Gormsen and N. Elvig, Novo

A NOVEL SOAP MAKING PROCESS

R.J. Bertozzi, E.G. Myers and J.R. Story, Armour-Dial Inc.

FORMULATION OF HIGHLY CONCENTRATED LIQUID DETERGENTS AND CLEANERS

M. Trautmen and W. Antwerpen, Hoechst A.G.

SUNLIGHT PHOTODEGRADATION OF SURFACTANT POLLUTANTS CATALYZED BY SEMICONDUCTOR MATERIALS

H. Hidaka, Msesei University, Japan; N. Serpone, Concordia University, Canada; E. Pellizetti, University di Torino, Italy; and M. Grazel, Ecole Polytechnique Federale de Lausanne, Switzerland.

Analysis of Lipids V**STUDY ON THE IDENTIFICATION OF RICE BRAN OIL**

Y. Takeshita, Kokushikan University, Tokyo, Japan; F. Iwata, Toroyo Industry Co. Ltd.; H. Yoshida and K. Hinata, Kokushikan University, Tokyo, Japan

DETERMINATION OF HYDROXY FATTY ACIDS IN FATS AND OILS

D.P. Schwartz, USDA Eastern Regional Research Center, Philadelphia, PA

DETERMINATION OF TOTAL SULFUR IN CANOLA OIL

V. Abraham and J.M. de Man, University of Guelph, Guelph, Ontario, Canada

A RAPID METHOD FOR DETERMINATION OF VOLATILE CARBONYLS AND FURFURALDEHYDE IN EDIBLE OILS

R. Przybylski, University of Manitoba, Winnipeg, Manitoba, Canada

COMPARING GRAIN PROTEIN DETERMINATION USING DIFFERENT KJELDAHL PROCEDURES

M.L. Iverson, USDA Federal Grain Inspection Service, Grandview, MO

COMPARISON OF DETERMINATION OF SOLID FAT CONTENT BY NMR AND DILATOMETRY (SFI)

R.E. Timms and E.M. Goh, Kempas Edible Oil Sdn

Meetings

Bhd, Johor, Malaysia

GLC, TLC AND NMR ANALYSES OF TRIGLYCERIDES PRESENT IN EVERY NATURAL JOJOBA OIL

T.K. Miwa, The Jojoba Society of America, Tempe, AZ

Chemical Modification of Protein

Charipersons: W.J. Wolf, USDA Northern Regional Research Center, Peoria, IL, and M. Kito, Kyoto University, Kyoto, Japan

CHEMICAL AND PHYSICAL LIPOPHILIZATION OF PROTEINS

M. Kito, Kyoto University, Kyoto, Japan

CHEMICAL INACTIVATION OF SOYBEAN TRYPSIN INHIBITORS

D.J. Sessa and P.E. Ghantous, USDA Northern Regional Research Center, Peoria, IL

APPLICATION OF PROTEOLYTIC ENZYMES TO STRUCTURAL ANALYSIS OF ALPHA sI-CASEIN ADSORBED ONTO AN OIL SURFACE OF AN EMULSION AND IMPROVEMENT OF THE EMULSIFYING PROPERTIES OF THE PROTEIN

S. Kaminogawa, M. Shimizu and K. Yamauchi, University of Tokyo, Tokyo, Japan

IMPROVING THE NUTRITIONAL PROPERTY OF SOY PROTEIN BY ENZYMATIC MODIFICATION

S. Arai, University of Tokyo, Tokyo, Japan

EFFECT OF LIMITED PROTEOLYSIS ON THE FUNCTIONAL PROPERTIES OF OVALBUMIN

E. Doi and N. Kitabatake, Kyoto University, Kyoto, Japan

LIMITED PROTEOLYSIS AND COVALENT ATTACHMENT OF PHOSPHATE AND AMINO ACIDS TO PROTEINS TO IMPROVE THEIR FUNCTIONAL AND NUTRITIONAL PROPERTIES

J.R. Whitaker, University of California, Davis, CA; M. Sitohy, Zagazig University, Zagazig, Egypt; and J.M. Chobert, National Institute of Agronomical Research, Nantes, France

FUNCTIONALITY OF ACYLATED FOOD PROTEIN

K.C. Rhee, Texas A&M University, College Station, TX

EXTRACTABILITY OF FOOD CONSTITUENTS IN THE PRESENCE OF ACYLATING AGENTS

L.U. Thompson, University of Toronto, Toronto, Ontario, Canada

FUNCTIONAL PROPERTIES OF CHEMICALLY MODIFIED EGG WHITE PROTEIN

H.B. Ball Jr., North Carolina State University, Raleigh, NC

FUNCTIONAL PROPERTIES OF OAT PROTEINS MODIFIED BY ACYLATION, TRYPSIN HYDROLYSIS OR LINOLEATE TREATMENT

C-Y Ma and D.F. Wood, Agriculture Canada Food Research Institute, Ottawa, Ontario, Canada

MODIFICATIONS OF ARACHIN—STRUCTURAL IMPLICATIONS

D.R. Rao, A.G.A. Rao, V. Prakash, Central Food Technological Research Institute, Mysore, India, and R.S. Sundar, All India Institute of Medical Sciences, New Delhi, India

Hydrogenation

HETEROGENEOUS CATALYTIC HYDROGENATION OF CANOLA OIL USING PALLADIUM

L.L. Diosady, N. Hsu, W.F. Graydon and L.J. Rubin, University of Toronto, Toronto, Ontario, Canada

THE SELECTIVE HYDROGENATION OF SOYBEAN OIL IN A CONTINUOUS, FIXED-BED REACTOR

G.M. Qualeatti, Signal Research Center, Des Plaines, IL

NEW DEVELOPMENTS IN THE FILTRATION OF CATALYST FROM HYDROGENATED EDIBLE/VEGETABLE OILS AND FATS

F.G. Veldkamp, L.F.C.-Lochem B.V., Lochem, The Netherlands

SELECTIVITY RATIO DETERMINATION IN HYDROGENATED FISH OILS

R.L. Coleman, United Catalysts Inc., Louisville, KY

HYDROGENATION OF CLAY TREATED SOYBEAN OIL: EFFECT OF PHOSPHOROUS

D.V. Okonek, T.J. Sullivan and O. Nebesh, Harshaw/Filtrol Partnership, Beachwood, OH

EFFECT OF BLEACHING ON HYDROGENATION OF FISH OIL: RATE OF HYDROGENATION AND SELECTIVITY

W. Zschau, Süd Chemie AG, Munich, West Germany; and Y. Tomiyama, S. Koizumi, T. Chinda and R. Coleman

INDUSTRIAL HYDROGENATION OF RICE BRAN OIL, A SUBSTITUTE FOR TALLOW IN SOAP MAKING

R.R. Press and K.S. Holla, Tata Oil Mills Co. Ltd., Bombay, India

Meetings

THE USE OF COPPER CHROMITES IN THE HYDROGENATION OF FATTY ACIDS AND FATTY ACID ESTERS

M. Schneider and K. Kochlochl, Sued-Chemie AG, Munich, West Germany

HYDROGENATION WITH A NOVEL MIXER

L.M. Litz and J.J. Santalone, Union Carbide Corp., Tarrytown, NY

Oxidation of Food Oils I

Cochairmen: E.N. Frankel, USDA Northern Regional Research Center, Peoria, IL, and K. Fujimoto, Tohoku University, Sendai, Japan

EFFECTS OF PIGMENTS ON THE OXIDATION STABILITY OF OLIVE OIL

N. Fakourelis, E-O C. Lee* and D.B. Min, The Ohio State University, Columbus, OH

STUDY ON THE ANTIOXIDATIVE ACTIVITY OF 1,3-DIOXAIN DAN DERIVATIVES

T. Isobe and H. Seino, Kitasato University, Kanagawa, Japan

WATER AND COBALT-CATALYZED LIPID AUTOXIDATION

J.L. Kahl and E.G. Schanus, Washington State University, Pullman, WA

CHOLESTEROL, CHOLESTEROL OXIDES AND ATHEROSCLEROSIS

P.B. Addis, University of Minnesota, St. Paul, MN

STEROL OXIDATION PRODUCTS IN THERMALLY OXIDIZED FATS AND OILS

M.A. Amer, F.M. Gharavy and D.B. Kupranycz, McGill University, Ste Anne de Bellevue, Quebec, Canada

CHOLESTEROL OXIDATION

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

OXIDATION OF MILK AND DAIRY LIPIDS

T. Richardson, University of California-Davis, Davis, CA

NEW ASPECTS OF ANTIOXIDANTS FROM UNROASTED AND ROASTED SESAME SEED OILS

Y. Fukuda, Ichimura Gakuen Junior College, Aichi, Japan; M. Nagata, T. Osawa, M. Namiki, Nagoya University, Aichi, Japan; and T. Ozaki, Takemoto Oil & Fat Co. Ltd., Aichi, Japan

DISTRIBUTION OF ¹⁴C AFTER ORAL ADMINISTRATION OF [U-¹⁴C]-LABELED METHYL LINOLEATE HYDROPEROXIDES AND THEIR SECONDARY OXIDATION PRODUCTS IN RATS

M. Oarada, T. Miyazawa, K. Fujimoto, Tohoku University, Sendai, Japan, and T. Kaneda, Koriyama Women's College, Japan

Dietary Lipids

EFFECTS OF DIETARY N-3 FATTY ACIDS ON POST-PRANDIAL SERUM LIPIDS

R. Saynor and T. Gillott, Northern General Hospital, Sheffield, England

VESICLES FROM SUCROSE FATTY ACID ESTERS

Y. Ishigami, National Chemical Laboratory for Industry, Tsukuba, Japan, and H. Machida, Mitsubishi Chemical Industries Ltd.

LEVELS OF FATTY ACIDS IN NORMAL POPULATIONS—A WORLDWIDE STUDY

M.S. Manku, N. Morse-Fisher and D.F. Horrobin, Efamol Research Institute, Kentville, Nova Scotia, Canada

THE EFFECT OF DIETARY FAT TYPE ON CHOLESTEROL AND LIPOPROTEIN METABOLISM IN RABBIT FED SEMIPURIFIED DIETS

J.E. Bauer, University of Florida, Gainesville, FL

ESSENTIAL FATTY ACID DEFICIENCY (EFAD) AND LIPID SUPPLEMENTATION BY TOTAL PARENTERAL NUTRITION (TPN) IN STRESSED AND SEPTIC PATIENTS

B.A. Svingen, R.T. Holman, S.B. Johnson, The Hormel Institute, Austin, MN; P.B. Alden and F.B. Cerra, University of Minnesota, Minneapolis, MN

METABOLISM OF *CIS*-12, *TRANS*-15-OCTADECADIENOIC ACID COMPARED TO COMMON DIETARY FATTY ACIDS IN MAN

E.A. Emken, W.K. Rohwedder, R.O. Adlof, H. Rakoff, USDA Northern Regional Research Center, Peoria, IL, and R.M. Gulley, St. Francis Medical Center, Peoria, IL

INFLUENCE OF DIETARY *TRANS* FATTY ACIDS ON THE LIPID METABOLISM OF THE BRAIN

J. Pettersen, Norwegian Herring Oil and Meal Research Institute, Fyllinsdalen, Norway

EFFECTS OF TYPE OF DIETARY FAT ON LIPID AND GLUCOSE METABOLISM IN PIGS

L.A. Woollett and D.C. Beitz, Iowa State University, Ames, Iowa (Honored Student Presentation)

ANTICARIOGENICITY OF LOW LEVELS OF DIETARY LAURICIDIN

Meetings

Lansing, MI

EFFECTS OF FATTY ACID SUPPLEMENTATION ON FLUID AND ELECTROLYTE REGULATION DURING STRESS IN THE RAT

D.E. Mills and R.P. Ward, University of Waterloo, Waterloo, Ontario, Canada

EFFECTS OF GESTATIONAL EFA SUPPLEMENTATION ON OFFSPRING BEHAVIOR DURING STRESS

D.E. Mills and R.P. Ward, University of Waterloo, Waterloo, Ontario, Canada

THE EFFECTS OF DIETARY FISH OIL CONTAINING EICOSAPENTAENOATE ON THE PRODUCTS OF THE PLASMA LECITHIN: CHOLESTEROL ACYLTRANSFERASE IN HUMAN SUBJECTS

B.J. Holub, D. Bakker and M. Skeaff, University of Guelph, Guelph, Ontario, Canada

GERMANICA L.)

M. Nomura and Y. Fujihara, Kinki University, Hiroshima, Japan

THE EFFECT OF LIPID DEPLETION AND REPLETION ON THE METABOLISM OF A STEROL AUTOTROPH

J.M. Gunn, G.W. Williams and R. de Antueno, Texas A&M University, College Station, TX

HEPATIC LIPID ABNORMALITIES IN A MOUSE MODEL FOR REYE'S SYNDROME

M.G. Murphy, L. Archambault-Schertzer, J. Vankessel and J.F.S. Crocker, Dalhousie University, Halifax, Nova Scotia, Canada

EFFECTS OF ESTROGEN IMPLANTATION ON ENDOGENOUS HYPERTRIGLYCERIDEMIA IN CHICKS

J.R. Park and B.H.S. Cho*, University of Illinois Burnside's Research Laboratory, Urbana, IL

CIRCULATING MICRORESERVOIRS: A LOW DENSITY LIPOPROTEIN ANALOG DRUG DELIVERY SYSTEM

B. Sears, PGE Technology Inc., Marblehead, MA

CHOLESTEROL INHIBITS CELL LYSIS INDUCED BY LYSOPHOSPHATIDYLCHOLINE

B. Malewicz, S. Parthasarathy and W.J. Baumann, The Hormel Institute, Austin, MN

MECHANISM OF THE ASSEMBLY OF LIPID-LINKED OLIGOSACCHARIDES IN THE RER MEMBRANE

M. Perez and C.G. Hirschberg, St. Louis University School of Medicine, St. Louis, MO (Honored Student Presentation)

FATTY ACID SYNTHESIS AND CONSERVATION BY RAT HEPATOCYTES CULTURED IN FAT-FREE, SERUM-FREE MEDIUM

D.S. Kelley and G.J. Nelson*, USDA Western Human Nutrition Research Center, San Francisco, CA

Biochemistry I

Co-chairperson: Y. Miura, Teikyo University School of Medicine, Tokyo, Japan

FREE RADICAL LIPID PEROXIDATION IN STRESS-INDUCED GASTRIC MUCOSAL LESIONS IN RATS

T. Yoshikawa, H. Miyagawa, N. Yoshida and M. Kondo, Kyoto Prefectural University of Medicine, Kyoto, Japan

HYDROXYLATION OF FATTY ACIDS AND ALCOHOLS BY MICROSOMAL CYTOCHROME P-450 SYSTEM FROM GERBIL LIVER

Y. Miura and H. Hisaki, Teikyo University School of Medicine, Tokyo, Japan, and S-I Oda, Nagoya University

GRANULOMA FORMATION IN LUNGS AND SPLEEN IN MICE BY THE NEW MYCOLIC ACID-CONTAINING GLYCOLIPIDS IN *NO-CARDIA* AND RELATED GROUP

I. Yano and K. Kaneda, Niigata University School of Medicine, Niigata, Japan; I. Tomiyasu, Tezukayama College; Y. Sumi and K. Kato, Sawai Pharmaceutical Co.

MASS CHROMATOGRAPHIC ANALYSIS OF C₇₀₋₉₀ ALPHA-MYCOLIC ACIDS FROM MYCOBACTERIA

K. Kaneda and I. Yano, Niigata University School of Medicine, Niigata, Japan, and S. Mizuno, Soai Woman's College, Osaka, Japan

SYNTHESIS OF 3,11-DIMETHYL-2-NONACOSANONE, A CONTACT COURTING PHEROMONE OF THE GERMAN COCKROACH (*BLATTELLA*

Saturday Afternoon

Surface Chemistry III

Chairperson: K. Ojino, Science University of Tokyo, Japan

TRENDS AND PROSPECTS OF THE SURFACTANT INDUSTRY IN JAPAN

F. Tokiwa, Kao Corporation, Japan

DEVELOPMENT OF DETERGENT AND TOILETRIES IN JAPAN ON THE POINT OF VIEW OF CONSUMERS' DEMAND AND ENVIRONMENT

A. Mori, Lion Corporation, Tokyo, Japan

Meetings

REMOVAL OF TRIGLYCERIDE FROM COTTON FABRIC BY LIPOLYTIC ENZYME-SURFACTANT SYSTEM

T. Fujii, T. Hashimoto, T. Kawase and M. Minagawa, Osaka City University, Japan

ASSOCIATION BEHAVIOR OF POLYOXYETHYLENEDODECYLETHYERPROPIOSULFONATES IN THE VICINITY OF CMC

M. Fukuda, T. Tamura and K. Ohbu, Lion Corporation, Japan

INTERACTION BETWEEN LIPOLYTIC ENZYME AND DETERGENTS

T. Kawaso, W-S Kim, T. Fujii and M. Minagawa, Osaka University, Japan

KINETIC STUDIES ON OLEFIN CO-SULFONATION

K. Kitano, S. Sekiguchi and T. Ogoshi, Lion Corporation, Japan.

CHAIN DYNAMICS IN LAMELLAR PHASES OF SELECTIVELY DEUTERATED NONIONIC SURFACTANT BY ²H NMR.

M.A. Phillippi, J. Hsieh, C. Marie, H. Ku, Clorox Technical Center, Pleasanton, CA, and A.J.I. Ward, University College, Dublin, Ireland.

DEUTERIUM NMR STUDY OF HYDROTROPIC ACTION IN LYOTROPIC LAMELLAR PHASES OF A NONIONIC SURFACTANT

A.J.I. Ward, University College, Dublin, Ireland; M.A. Phillippi and J. Hsieh, Clorox Technical Center, Pleasanton, CA.

AN INVESTIGATION OF MICROEMULSION ASSOCIATION USING FOURIER-TRANSFER PULSED-FIELD GRADIENT NMR BASED SELF-DIFFUSION DATA

A.J.I. Ward, University College, Dublin, Ireland; M.A. Phillippi and R.J. Wiersma, Clorox Technical Center, Pleasanton, CA.

STRUCTURAL ASPECTS IN AQUEOUS MICELLAR SOLUTIONS OF SURFACTANT MIXTURES

J. Hsieh, R.J. Wiersma, Clorox Technical Center, Pleasanton, CA, and A.J.I. Ward, University College, Dublin, Ireland.

Analysis of Lipids VI

DETERMINATION OF OCTADECENOATE AND OCTADECADIENOATE ISOMERS IN VEGETABLE OIL PRODUCTS

M.S. Fraser and G. Frankl, Beatrice Grocery Group, Fullerton, CA

EFFECT OF 3-ACYL CHAIN-LENGTH ON THE

MOLECULAR PACKING OF 1,2-DIPALMITOYL-3-ACYL-SN-GLYCEROLS

D.R. Kodali, D. Atkinson and D.M. Small*, Boston University School of Medicine, Boston, MA

DYNAMIC POLYMORPHISM OF *VERNONIA GALAMENSIS* TRIGLYCERIDES DURING COOLING-REHEATING CYCLES

S-P Chang, K.D. Carlson and J.A. Rothfus, USDA Northern Regional Research Center, Peoria, IL

REASONS FOR THE HIGH PROPORTION OF PHEOPHYTIN IN EDIBLE PLANT OILS

R. Usuki, Shokei Women's Junior College, Sendai, Japan; Y. Endo, Tohoku University, and T. Kaneda, Koriyama Women's College, Japan.

A CRITIQUE OF THE LIPOXYGENASE METHOD FOR THE DETERMINATION OF POLYUNSATURATED FATTY ACIDS

C. Szonyi, J.D. Craske* and S. Haran, Unilever Australia Ltd., Balmain, New South Wales, Australia

CHARACTERIZATION OF THE LIPIDS OF *METHANOBACTERIUM* (M.) THERMOAUTOTROPHICUM

J.K.G. Kramer and F.D. Sauer, Animal Research Centre, Agriculture Canada, Ottawa, Ontario, Canada

RHYTHMS IN CHOLESTEROL, CHOLESTERYL ESTERS, FREE FATTY ACIDS AND TRIGLYCERIDES IN BLOOD OF LACTATING DAIRY COWS

J. Bitman, D.L. Wood and A.M. Lefcourt, USDA Milk Secretion and Mastitis Laboratory, Beltsville, MD

Breeding of Oilseeds for Protein

Chairperson: M.C. Nielsen, USDA-ARS, Purdue University, W. Lafayette, IN

BREEDING FOR SEED PROTEIN CONTENT IN SOYBEANS

J.R. Wilcox, USDA-ARS, Purdue University, West Lafayette, IN

INHERITANCE OF LIPOXYGENASE ISOZYMES IN SOYBEAN SEEDS

K. Kitamura and A. Kikuchi, Iwate University, Morioka, Japan

BIOGENESIS OF PROTEIN BODIES IN MATURING PUMPKIN COTYLEDONS

M. Nishimura, I. Hara-Nishimura, M. Hayashi and T. Akazawa, Nagoya University, Nagoya, Japan

QUANTITATIVE EXPRESSION OF BEAN SEED

Meetings

PROTEINS

F.A. Bliss, University of Wisconsin-Madison, Madison, WI

THE ACCUMULATION SITES AND THE MECHANISMS OF RICE STORAGE PROTEINS

K. Tanaka and M. Ogawa, Kyoto University, Kyoto, Japan, and H. Yamagata, Osaka Medical College, Japan

FACTORS CONTROLLING THERMAL GELATION AND GEL PROPERTIES OF SOYBEAN 11S GLOBULIN

T. Mori and S. Utsumi, Kyoto University, Kyoto, Japan, and T. Nakamura, Hohnen Oil Co. Ltd., Japan

THE STRUCTURE AND EXPRESSION OF GLYCININ GENES FROM SOYBEANS

N.C. Nielsen, L. Floener, R. P. Evans, B.J. Scallon, C. Dickinson and T.J. Cho, Purdue University, W. Lafayette, IN

Biotechnology

Chairman: E.G. Hammond, Iowa State University, Ames, IA

IDENTIFICATION OF MUTANTS PREVENTING N-HEXADECANE UPTAKE AMONG 26 N-ALKANE NON-UTILIZING MUTANTS OF YARROWIA (SACCHAROMYCOPOISIS) LIPOLYTICA

J.B. Bassel and R.K. Mortimer, University of California-Berkeley, Berkeley, CA

MICROBIAL PRODUCTION OF TRIGLYCERIDE-RICH FATS AND OILS

B.C. Sekula, Best Foods Research and Engineering Center, Union, NJ

GENETIC STUDY ON THE YEAST PHOSPHATIDYLETHANOLAMINE METHYLATION PATHWAY

S. Yamashita, T. Kodaki, Y. Tsukagoshi, J-I Nikawa and K. Hosaka, Gunma University, Maebashi, Japan

PERFORMANCE CHARACTERISTICS OF AN IMMOBILIZED LIPASE MEMBRANE REACTOR

F. Taylor and D.J. O'Brien, USDA Eastern Regional Research Center, Philadelphia, PA

DEVELOPMENT OF MEMBRANE BIOREACTOR SYSTEM FOR LIPASE-CATALYZED PROCESSING OF OIL AND FATTY ACID

T. Yamane, M.M. Hoq and S. Shimizu, Nagoya University, Nagoya, Japan

IMMOBILIZED LIPASE CHARACTERISTICS IN ESTER SYNTHESIS AND EFFECTS OF WATER

AND TEMPERATURE IN VARIOUS REACTIONS

P. Eigtved, T.T. Hansen, Novo Industri, Bagsvaerd, Denmark, and H. Sakaguchi, Novo Industry (Japan) Ltd., Japan

ENZYMATIC REACTION OF OILS AND FATS BY BIOREACTOR

T. Funada, J. Hirano and Y. Tanaka, Nippon Oil & Fats Co. Ltd., Ibaraki, Japan

ENZYMATIC SYNTHESIS OF CARBOHYDRATE ESTERS OF FATTY ACID (V) REACTION PRODUCTS OF SORBITOL WITH FATTY ACIDS

T. Uchibori, H. Seino, Kitasato University, Kanagawa, Japan; T. Nishitani and I. Morita, Dai-Ichi Kogyo Seiyaku Co. Ltd., Japan

OXIDATIVE STABILITY OF LOW-LINOLENIC ACID SOYBEAN OIL, HIGH STEARIC ACID SOYBEAN OIL, AND TWO COMMERCIAL SOYBEAN OILS

L.A. Miller, P.J. White*, W.R. Fehr and E.G. Hammond, Iowa State University, Ames, Iowa

GENETIC AND MOLECULAR FEATURES OF LIPOXYGENASE ISOLINES

C.S. Davies and N.C. Nielsen, Purdue University, West Lafayette, IN

SEEKING THE MOLECULAR GENETIC BASIS FOR THE REGULATION OF OIL CONTENT IN SOYBEANS

P. Kwanyuen, J.W. Burton and R.F. Wilson*, USDA Agricultural Research Service, North Carolina State University, Raleigh, NC

GENETIC CONVERSION OF LINSEED OIL FROM INDUSTRIAL TO EDIBLE QUALITY

A.G. Green, CSIRO Plant Industry, Canberra City, Australia

Biochemistry II

MEMBRANE STRUCTURE OF LIPOSOME-TYPE ARTIFICIAL RED BLOOD CELLS STABILIZED WITH CARBOXYMETHYL CHITIN

A. Kato and T. Kondo, Science University of Tokyo, Tokyo, Japan

CHEMICAL SIMULATION OF PQQ-CONTAINING AMINE OXIDASE BY MICELLAR REACTION

Y. Ohshiro, S. Itoh, Y. Kitamura, N. Kato and T. Agawa, Osaka University, Osaka, Japan

DEFICIENCIES OF ARACHIDONIC ACID AND OTHER POLYUNSATURATED ACIDS IN HUMAN DISEASE

R.T. Holman and S.B. Johnson, The Hormel

Meetings

Institute, University of Minnesota, Austin, MN

CORTISOL-CHOLESTEROL RELATIONSHIPS IN CORONARY ARTERY DISEASE, PREGNANCY AND STRESS

H.A. Schwertner, USAF School of Aerospace Medicine, Brooks Air Force Base, TX; L. Torres, W.G. Jackson and H.A. Maldonado

THE EFFECT OF BODY SIZE AND POSTPARTUM WEIGHT CHANGE ON FATTY ACIDS IN HUMAN MILK

K.E. Hundrieser, R.M. Clark and R.G. Jensen, University of Connecticut, Storrs, CT (Honored Student Presentation)

THE ROLE OF FRAGRANCES (VOLATILE LIPIDS) IN THE LIVES AND IDENTITIES OF ORCHIDS

R.T. Holman, The Hormel Institute, Austin, MN

REGULATION OF DOLICHYL PHOSPHATE AVAILABILITY IN GERMINATING SOYBEANS

K. Ravi, J.W. Rip and K.K. Carroll*, University of Western Ontario, London, Ontario, Canada

CHANGES IN THE OXIDATIVE METABOLISM OF FATTY ACIDS IN A PRECANCEROUS STATE

N.K. Menon and J.F. Mead, University of California, Los Angeles, CA

Marine Oils

Chairpersons: R. Ackman, Technical University of Nova Scotia, Halifax, Nova Scotia, Canada, and M. Kayama, Hiroshima University, Japan

LIPID PRODUCTION IN A MARINE ALGA USING CAGE CULTURE TURBIDOSTATS FOR CONTINUOUS AUTOMATED CULTURE WITH LIPID CLASS MEASUREMENT BY THE CHROMA-ROD-IATROSCAN (TLC/FID) SYSTEM

C.C. Parrish, P.J. Wangersky, Dalhousie University, Halifax, Nova Scotia, Canada, and R.G. Ackman, Technical University of Nova Scotia, Halifax, Nova Scotia, Canada (Honored Student Presentation)

CIS-5-OLEFINIC UNUSUAL FATTY ACIDS AS COMMON LIPID COMPONENTS OF ECHINOIDEA FROM JAPAN WATERS

T. Takagi, M. Kaneniwa, Y. Itabashi, Hokkaido University, Hakodate, Japan, and R.G. Ackman, Technical University of Nova Scotia, Canada

METABOLISM OF WAX ESTERS IN FISH

M. Mankura, Ikeda Tohka Industries Co. Ltd., Hiroshima, Japan, and M. Kayama, Hiroshima University, Japan

EFFECTS OF DIFFERENT COOKING METHODS ON LIPID COMPOSITION OF FISH FILLETS

O. Yoshima and F. Kumiko, Sanyo Gakuen Junior College, Okayama, Japan

COMPARISON OF SELECTED LIPIDS FROM TESTES OF IMMATURE HARP SEALS (*PHOCA GROENLANDICA*), MATURE AND IMMATURE GREY SEALS (*HALICHOERUS GRYPUS*), MATURE WALRUS (*ODOBENUS ROSMARUS*) AND MATURE BELUGA (*DELPHINAPTERUS LEUCAS*)

M. Yurkowski, Freshwater Institute, Winnipeg, Manitoba, Canada

SLINE-ASSOCIATED LIPID-DERIVED VOLATILE AROMA COMPOUNDS RELATED TO THE LIFE CYCLE STAGES OF SALMON (*ONCORHYNCHUS* SP.)

D.B. Josephson, R.C. Lindsay and D.A. Stuiber, University of Wisconsin, Madison, WI (Honored Student Presentation)

PROSTAGLANDIN SYNTHESIS IN FISH THROMBOCYTE

M. Kayama, Hiroshima University, Hiroshima, Japan, and T. Sado, Lion Corporation, Japan

FATTY ACID COMPOSITION OF COMMONLY CONSUMED MARINE AND LAND MAMMAL FATS, AND OF RED CELL PHOSPHOLIPIDS AND BREAST MILK FROM INUIT LIVING ON BAFFIN ISLAND

S.M. Innis, University of British Columbia, Vancouver, BC, Canada; H.V. Kuhnlein, McGill University, Canada; and D. Kinloch, Health and Welfare Canada, Canada

Oxidation of Foods Oils II

Cochairmen: E.N. Frankel, USDA Northern Regional Research Center, Peoria, IL, and K. Fujimoto, Tohoku University, Sendai, Japan

ALPHA TOCOPHEROL OXIDATION MEDIATED BY SUPEROXIDE ANION (O₂⁻)

A.S. Csallany and Y.L. Ha, University of Minnesota, St. Paul, MN

PROTEIN DAMAGE RESULTING FROM EXPOSURE TO OXIDIZING LIPIDS

J.W. Finley and G. Templeman, Nabisco Brands Inc., East Hanover, NJ

OXIDATION OF 1-(ALK-1-ENYL)-2,3-DIACYLGLYCEROLS: MODELS FOR PLASMA LOGEN OXIDATION

T.A. Foglia, E. Nungesser and W. Marmer, USDA Eastern Regional Research Center, Philadelphia, PA

Meetings

FLUORESCENT PRODUCTS DERIVED FROM THE REACTION OF ADENINE, METHYL LINOLEATE HYDROPEROXIDES, Fe(II), AND ASCORBIC ACID

K. Hasegawa, K. Fujimoto, Tohoku University, Sendai, Japan; T. Kaneda, Koriyama Women's College; W.E. Neff and E.N. Frankel, USDA Northern Regional Research Center, Peoria, IL

FORMATION OF SHORT CHAIN VOLATILE ORGANIC ACIDS IN THE AUTOMATED AOM METHOD

J.M. deMan, L. deMan and F. Tie, University of Guelph, Guelph, Ontario, Canada

ANALYSIS OF VOLATILE THERMAL DECOMPOSITION PRODUCTS OF DIMERS AND OLIGOMERS FROM OXIDIZED METHYL LINEOLATE BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY

E.N. Frankel, W.E. Neff and E. Selke, USDA Northern Regional Research Center, Peoria, IL

NATURAL ANTIOXIDANTS IN FOODS: APPLICATIONS AND CHEMICAL EVALUATIONS

J. Lölinger, M-C Savoy and F. Saucy, Nestec Ltd., Vevey, Switzerland

CHAIN REACTIONS IN AUTOXIDATION OF FATTY ACIDS

M.C. Simic, National Bureau of Standards, Gaithersburg, MD

STUDIES ON THE OXIDATION OF ANIMAL FATS

A.J. St. Angelo, J.R. Vercellotti, USDA Southern Regional Research Center, New Orleans, LA, and H.P. Dupuy, VPI, Blacksburg, VA

Poster Session

KINETICS OF LIPASE-CATALYZED ESTER EXCHANGE REACTIONS IN ORGANIC MEDIUM UNDER CONTROLLED HUMIDITY CONDITIONS

H.L. Goderis and P.P. Tobback, Catholic University of Luvin, Luvin, Belgium

IS AUTOCLAVING NECESSARY FOR AN ADEQUATE GROWTH PERFORMANCE OF RATS FED ON WINGED BEAN SEED FLOUR?

S.S. Kantha and J.W. Erdman Jr., University of Illinois, Urbana, IL

THE CAROTENOIDS AND TOCOLS OF CORN GRAIN

E.J. Weber, University of Illinois, Urbana, IL

EFFECT OF DEUTERATION ON PHASE TRANSITION AND POLYMORPHISM OF UNSATURATED ACIDS AND ESTERS

S-P Chang and J.A. Rothfus, USDA Northern Regional Research Center, Peoria, IL

IMPROVED METHOD FOR THE SYNTHESIS OF 1 OR 3-ACYL-SN-GLYCEROLS

D.R. Kodali, Boston University School of Medicine, Boston, MA

PURIFICATION AND SUBSTRATE SPECIFICITY OF RABBIT HEART LIPOPROTEIN LIPASE

J.E. Bauer and G.J. Sciscent, University of Florida, Gainesville, FL

A COMPARATIVE STUDY OF ADRENATE CYCLOXYGENATION BY RAM AND SWINE VESICULAR MICROSOMES AND IN WHOLE TISSUE HOMOGENATES

A. Ferretti and V.P. Flanagan, USDA Human Nutrition Research Center, Beltsville, MD

AFLATOXIN IN ARIZONA COTTONSEED: SIMULATION OF INSECT VECTORED INFECTION OF COTTON BOLLS BY *ASPERGILLUS FLAVUS*

L.S. Lee, W.R. Goynes, USDA Southern Regional Research Center, New Orleans, LA, and P.E. Lacey, University of Arizona

ABSOLUTE CONFIGURATION OF PENTAHYDROXYL BILE ALCOHOLS EXCRETED BY PATIENTS WITH SITOSTEROLEMIA AND XANTHOMATOSIS(SX): CIRCULAR DICHROISM AND C¹³-NMR STUDIES

B. Dayal, G.S. Tint, B. Toome and G. Salen, UMDNJ-New Jersey Medical School and VA Medical Center, Newark, NJ

STABILITY OF THE CHARACTER FOR AFLATOXIN PRODUCTION BY *ASPERGILLUS FLAVUS* OBTAINED FROM ARIZONA COTTON

L.S. Lee, A.R. Lax, J.E. Mellon and M.A. Klich, USDA Southern Regional Research Center, New Orleans, LA

A SIMPLE METHOD FOR DETERMINING THE CRITICAL MICELLE CONCENTRATION OF SURFACTANTS IN SOLUTION

S.C. Goheen and R.S. Matson, Bio-Rad Laboratories, Richmond, CA

AN IMPROVED METHOD FOR MASS SPECTROMETRIC QUANTIFICATION OF PGE-M: ITS APPLICATION TO A HUMAN DIET STUDY

A. Ferretti, J.T. Judd and M.W. Marshall, USDA Human Nutrition Research Center, Beltsville, MD

CALIBRATION OF HUMAN SERA LOW DENSITY LIPOPROTEINS (LDL) AND HIGH DENSITY LIPOPROTEIN (HDL) GRADIENT GEL

Meetings

ELECTROPHORESIS SUBFRACTIONS BY ANALYTIC ULTRACENTRIFUGATION

F.T. Lindgren, A.V. Nichols, G.L. Adamson, M.A. Austin, L.A. Glines, V. Martin, R.M. Krauss, University of California, Berkeley, CA, and P.D. Wood, Stanford University School of Medicine.

TRANS DIENE FORMATION DURING CATALYTIC HYDROGENATION AND ISOMERIZATION OF SOYBEAN OIL

R.C. McDonald and D.J. Armstrong, US Food and Drug Administration, Washington, DC

THE USE OF SUPER CRITICAL FLUID CO₂ TO FRACTIONATE FATTY ACID ETHYL ESTERS DERIVED FROM MENHADEN OIL

W.B. Nilsson, J. Spinelli, V.F. Stout and J. Hudson, National Fish Meal and Oil Association, Seattle, WA

DIETARY CARBOHYDRATE AND ALCOHOLIC FATTY LIVER

G.A. Rao, D.E. Riley and E.C. Larkin, VA Medical Center, Martinez, CA

ISOLATION BY HPLC OF FREE MALONDIALDEHYDE AS A PRODUCT OF THE XANTHINE-OXIDASE DEPENDENT, IRON-PROMOTED PEROXIDATION OF CARDIAC MEMBRANE PHOSPHOLIPID

D.R. Janero and B. Burghardt, Hoffmann-La Roche Inc., Nutley, NJ

ANOXIA-LIKE INJURY IN THE NEONATAL RAT-HEART MUSCLE CELL INDUCED BY THE FATTY ACID ANALOG 5-(TETRADECYLOXY)-2-FUROIC ACID (TOFA)

D.R. Janero and B. Burghardt, Hoffmann-La Roche Inc., Nutley, NJ

LIVER AND PLASMA PHOSPHOLIPID FATTY ACIDS IN RATS FED WITH MARINE AND EVENING PRIMROSE OIL

B.A. Nassar, Y-S Huang*, M.S. Manku and D.F. Horrobin, Efamol Research Institute, Kentville, Nova Scotia, Canada

EFFECT OF TYPE OF DIET ON DOCOSAHEXAENOIC ACID LEVEL IN STREPTOZOTOCIN-INDUCED DIABETIC RAT

Y-S Huang, R. Takahashi, K. Fujii and D.F. Horrobin, Efamol Research Institute, Kentville, Nova Scotia, Canada

EFFECTS OF DIETARY FATTY ACIDS ON FATTY ACID RELEASE FROM A PERFUSED RAT VASCULAR BED

J.P. Mtabaji, M.S. Manku and D.F. Horrobin, Efamol Research Institute, Kentville, Nova Scotia,

Canada

SIMULTANEOUS ENERGY MINIMIZATION OF SEVEN TRIGLYCERIDE APHPA-FORM MOLECULES IN VARIOUS PACKING ARRANGEMENTS

J.W. Hagemann and J.A. Rothfus, USDA Northern Regional Research Center, Peoria, IL

BILAYER ASYMMETRY IN LYSOPHOSPHATIDYLCHOLINE/CHOLESTEROL VESICLES: A ³¹P NMR STUDY

W.J. Baumann and V.V. Kumar, The Hormel Institute, Austin, MN

THE RELATIVE ANTIOXIDANT EFFECTIVENESS OF WOODSMOKE PHENOLS IN SOYBEAN OIL AND LARD UNDER ACCELERATED CONDITIONS

S.L. Cuppett and D. Winters, University of Nebraska, Lincoln, NE

THE RELATIONSHIP OF MATURITY TO 2-METHYL PROPANAL IN HEAD-SPACE VOLATILES OF PEANUTS

T.H. Sanders and R.L. Greene, USDA National Peanut Research Laboratory, Dawson, GA

COMPOSITION AND NUTRITIVE VALUE OF NORTHERN WILD RICE, *ZIZANIA PALUSTRIS*

K. Sosulski, Saskatchewan Research Council, and F.W. Sosulski, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

CATALYZED DEAMIDATION OF OILSEED PROTEINS

F.F. Shih and A.D. Kalmar, USDA Southern Regional Research Service, New Orleans, LA

PREPARATION AND CHARACTERIZATION OF DEUTERATED BEHENIC ACID

A.V. Bailey and R.H. Liu, USDA Southern Regional Research Center, New Orleans, LA

CAPILLARY GAS-LIQUID CHROMATOGRAPHY OF SOME CHOLESTEROL OXIDES

C-S J. Shen and A.J. Sheppard, U.S. Food and Drug Administration, Washington, DC

A PROCEDURE FOR IMPROVING PARTICLE SIZE ANALYSIS DATA FOR SOYBEANS AND OTHER GRAINS

M.L. Iverson and J.M. Walls, USDA Federal Grain Inspection Service, Grandview, MO

IDENTIFICATION OF LINOLEIC ACID GEOMETRICAL ISOMERS IN FRYING OILS

J.L. Sebedio, A. Grandgirard, J. Prevost and C. Septier, I.N.R.A., Dijon, France