

Session Schedule

Monday, April 30, 1984

Morning

Food Safety Regulations
Education (round table)
Structure and Function of Protein
Membrane Filtration
Potentiality of Biotechnology to the
Industry
Fatty Acid Synthases

Afternoon

Hydrogenation
Environmental (round table)
Physical/Chemical Basis of Protein
Chemistry
Iatrosan TLC/FID System
Practical Applications of Biotechnology
Fatty Acid Synthases (continued)

Tuesday, May 1, 1984

Morning

Plant Engineering (General)
Nutrition (General)
Analysis of Waxes
Flavor and Oxidation of Fats and Oils
Surfactants and Detergents I: Performance
and Evaluation
Oils and By-Products from New Crops
Poster Session

Afternoon

Regulation of Production of Prostaglandins
and Other Eicosanoids
Dietary Lipid in Health and Disease

Trends in Industrial Usage for Vegetable Oils
Surfactants and Detergents II: Performance
and Evaluation (continued)
Plant Engineering (General)
Oils and By-Products from New Crops
(continued)

Wednesday, May 2, 1984

Morning

Anti-nutritional Factors—Trypsin Inhibitors
Physical Properties of Oil
Automation and Process Control
Supercritical Chromatography
Surfactants and Detergents Symposium on
Wetting
Novel Development in GLC

Afternoon

Anti-nutritional Factors—Other
New Crops and Processes
Color Problems: Science and Technology
Analytical Chemistry (General)
Computer Technology (Lab)
Supercritical System and Technique

Thursday, May 3, 1984

Morning

Biochemistry (General)
Dietary Lipids in Health and Disease
Surfactants and Detergents III: Detergent
Analysis
Protein Mineral Interaction
Oilseed Products for Livestock Feed
Lipid Recovery

Meetings

Monday, April 30, 1984

Session **Food Safety Regulation**

Chairperson: David Firestone, FDA, Washington, D.C.

Cochairperson: Y.S. Lee, FDA, Washington, D.C.

HISTORICAL OVERVIEW OF FOOD SAFETY ENFORCEMENT

S.A. Miller, Bureau of Foods, Food and Drug Administration, Washington, D.C.

NEW APPROACHES TO THE REGULATION OF CARCINOGENS IN FOODS

H. Blumenthal and R.J. Scheuplein, * Bureau of Foods, Food and Drug Administration, Washington, D.C.

OVERVIEW OF THE 'RED BOOK'—TOXICOLOGICAL PRINCIPLES

A.M. Rulis, Bureau of Foods, Food and Drug Administration, Washington, D.C.

STATUS OF LEGISLATION TO REVIEW THE FOOD SAFETY LAWS

S.M. Pape, Patton, Boggs & Blow, Washington, D.C.

Session **Panel Discussion on Higher Education in Fats, Oils and Lipids**

Chairperson: David B. Min, Ohio State University, Columbus, Ohio

Panel members:

Representing industry: T.H. Applewhite, Kraft Inc.; G.A. Jacobson, Campbell Soup Co.; S.J. Laning, Stokely Van Camp Ind.

Representing AOCS: J. Lyon, A.R. Baldwin
Representing academia: J.B.M. Rattray, University of Guelph; E.G. Perkins, University of Illinois; John deMan, University of Guelph

Representing government: T.L. Mounts, USDA Northern Regional Research Center; T.A. Foglia, USDA Eastern Regional Research Center

Session **Structure and Function of Protein**

Chairman: C.N. Pace, Texas A&M University, College Station, Texas

EFFECT OF PROTEIN CONFORMATION ON PROTEOLYTIC DIGESTIBILITY

C.N. Pace, Texas A&M University, College Station, Texas

CHEMICAL AND PHYSICAL STRUCTURE OF PROTEINS AND THEIR DIGESTIBILITIES

J.R. Whitaker, R.E. Feeney, University of California, Davis, California

OXYGENATION OF LIPIDS AND RELATED HYDROPHOBIC COMPOUNDS BY CYTOCHROME P-450

M.J. Coon, L.D. Gorsky*, University of Michigan, Ann Arbor, Michigan

NEW PROTEIN STRUCTURE—FUNCTION TECHNOLOGY AND APPLICATIONS

R.W. Gracy, North Texas State University, Fort Worth, Texas

CHEMICAL MODIFICATIONS OF PROTEINS

R.E. Feeney, J.R. Whitaker, University of California, Davis, California

RECENT ADVANCES IN THE STRUCTURAL DETERMINATION OF PROTEINS

K.J. Wilson, J.E. Strickler, Cetus Corporation, Emeryville, California

Session **Membrane Filtration Technologies in Processing**

Chairperson: E.C. Baker, USDA Northern Regional Research Center, Peoria, Illinois
Cochairperson: J.T. Lawhon, Texas A&M University, College Station, Texas

ULTRAFILTRATION: THEORY AND PRACTICE

B.R. Breslau, R.A. Aust, Romicon Inc., Woburn, Massachusetts

CONCENTRATION OF SOY PROTEIN IN AQUEOUS SYSTEMS BY ULTRAFILTRATION

G.H. Hartman Jr., Mead Johnson & Co., Evansville, Indiana

MEMBRANE PROCESSING GLANDLESS AND GLANDED COTTONSEED FLOUR EXTRACTS TO PRODUCE EDIBLE PROTEIN ISOLATES

J.T. Lawhon, Texas A&M University, College Station, Texas

REVERSE OSMOSIS AND ULTRAFILTRATION ON STILLAGE SOLUBLES FROM CORN DRY-MILLED FRACTIONS

Y.V. Wu, K.R. Sexson, USDA Northern Regional Research Center, Peoria, Illinois

PILOT-PLANT PREPARATION OF A SOY TRYPSIN INHIBITOR CONCENTRATE

E.C. Baker, J.J. Rackis, USDA Northern Regional Research Center, Peoria, Illinois

CROSSFLOW MEMBRANE FILTRATION—WHAT HAS BEEN DONE, WHAT DOES THE FUTURE HOLD?

D.D. Spatz, D.J. Paulson, L.F. Comb, Osmonics Inc.

Session **Potentiality of Biotechnology to the Industry**

Chairperson: J.B.M. Rattray, University of Guelph, Guelph, Ontario, Canada

PROGRESS OF IMPROVING THE FATTY ACID COMPOSITION OF SOYBEAN OIL

E.G. Hammond, W.R. Fehr, Iowa State University, Ames, Iowa

BIOTECHNOLOGY AND THE FATS AND OILS INDUSTRY—AN OVERVIEW

J.B.M. Rattray, University of Guelph, Guelph, Ontario, Canada

Meetings

FURTHER ASPECTS OF WAX ESTER BIOSYNTHESIS BY *Acinetobacter* sp. HO1-N

J. Geigert, S.L. Neidleman*, Cetus Corporation, Emeryville, California

NOVEL PALM OILS FROM CLONED PALMS

L.H. Jones, Unilever Research, Sharnbrook, England

COCOA BEAN CELL AND EMBRYO CULTURE

M.-C. Wen, J.B. German*, J.E. Kinsella, Cornell University, Ithaca, New York

PROSPECTS AND PROBLEMS IN THE LARGE SCALE PRODUCTION OF METABOLITES FROM PLANT CELL TISSUE CULTURES

M.L. Shuler, J.W. Pyne, A.G. Hallsby, Cornell University, Ithaca, New York

DEVELOPING A NEW INDUSTRIAL ENZYME APPLICATION—A STRATEGY

C.O.L. Boyce, Novo Laboratories Inc., Wilton, Connecticut

EVALUATION OF APPLICATIONS OF PLANT CELL TISSUE CULTURE

D.W. Wheat, A.B. Caragay, A.A. Herrero, Arthur D. Little Inc., Cambridge, Massachusetts

Session **Fatty Acid Synthases: Structure, Function and Molecular Biology** (Symposium honoring Prof. P.K. Stumpf)

Chairman: P.E. Kolattukudy, Washington State University, Pullman, Washington

PRESENT STATUS CONCERNING THE BIOSYNTHESIS OF FATTY ACIDS IN HIGHER PLANTS

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

GENETIC STUDIES ON YEAST FATTY ACID SYNTHASE

E. Schweizer, M. Schweizer, L.M. Roberts, H.J. Höltnke, Universität Erlangen-Nürnberg, West Germany

STRUCTURE OF YEAST FATTY ACID SYNTHETASE AND CHARACTERIZATION OF SUBUNITS' GENES

M.A. Kuziora, D.M. Spector, J.K. Stoops, S.J. Wakil, Baylor College of Medicine, Houston, Texas

MAMMARY GLAND FATTY ACID SYNTHASE

S. Smith, Children's Hospital Medical Center, Oakland, California

UROPYGIAL GLAND FATTY ACID SYNTHASE

P.E. Kolattukudy, A.J. Poulouse, Washington State University, Pullman, Washington

STRUCTURAL AND FUNCTIONAL MODEL FOR FATTY ACID SYNTHETASE OF ANIMAL TISSUES

J.K. Stoops, S.J. Wakil, Baylor College of Medicine, Houston, Texas

EVOLUTION OF MAMMALIAN FATTY ACID SYNTHASE BY GENE FUSION

D.G. Hardie, A.D. McCarthy, Dundee University, Dundee, Scotland

THE AVIAN FATTY ACID SYNTHASE GENE:

MOLECULAR CLONING AND REGULATION OF mRNA SEQUENCE ABUNDANCE

A.G. Goodridge, Case Western Reserve University, Cleveland, Ohio; S.M. Morris Jr., University of Pittsburgh, Pennsylvania; R.A. Jenik, M.A. McDevitt, J.H. Nilson, J.E. Fisch, Case Western Reserve University, Cleveland, Ohio

QUINARY INTERACTIONS OF LIPOGENIC ENZYMES

P.A. Srere, T.C. Linn, VA Medical Center, Dallas, Texas

Session **Hydrogenation**

Chairperson: R.C. Hastert, Harshaw/Filtrol Partnership, Cleveland, Ohio

Cochairperson: J.L. Roorda, Bunge Edible Oil Corporation, Kankakee, Illinois

DETERMINATION OF IODINE VALUE BY NEAR INFRARED REFLECTANCE SPECTROSCOPY

N.M. Ingber, D.S. Kalka, Durkee Foods-SCM Corporation, Strongsville, Ohio

CRYSTAL STRUCTURE OF HYDROGENATED CANOLA OIL

A. Naguib-Mostafa, A.K. Smith, J.M. deMan, University of Guelph, Ontario, Canada

HYDROGENATION OF CANOLA OIL WITH A COMMERCIAL NICKEL CATALYST

L. deMan, J.M. deMan, University of Guelph, Ontario, Canada; R.G. Ackman, Canadian Institute of Fisheries Technology, Halifax, Nova Scotia, Canada

THE SOLUTION TO SPENT CATALYST DISPOSAL—RECLAMATION

F.J. Hennion, Imetco, Ellwood City, Pennsylvania; V.A. Vellella, Pittsburgh Pacific Processing Co.

FLUID MIXING EFFECTS IN HYDROGENATION

J.Y. Oldshue, Mixing Equipment Co. Inc., Rochester, New York

HYDROGENATION OF CANOLA OIL USING RUTHENIUM CATALYST

C. Bello, L.L. Diosady, W.F. Graydon, L.J. Rubin, University of Toronto, Ontario, Canada

HOMOGENEOUS HYDROGENATION OF SOYBEAN OIL

S. Goldstein, I. Rave, A. Dolev, Koor Foods Ltd., Haifa, Israel

CAPILLARY GC VOLATILE ANALYSIS OF HEATED FATS—EFFECT OF HYDROGENATION AND ADDITIVES

J.M. Snyder, E.N. Frankel, K. Warner, USDA Northern Regional Research Center, Peoria, Illinois

CATALYTIC DECOMPOSITION OF METHANOL

A. Kristiansen, Haldor Topsøe A/S, Lyngby, Denmark

EVALUATION OF CONTINUOUSLY HYDROGENATED OILS FOR SALADS AND COOKING

K.J. Moulton Sr., S. Koritala, K. Warner, E.N. Frankel, T.L. Mounts*, USDA Northern Regional Research Center, Peoria, Illinois

Meetings

Session **Environmental** (round table discussion)

Chairperson: Earle Fritz, Union Camp Corporation, Savannah, Georgia
 Cochairperson: Michael J. Boyer, Applied Engineering & Science, Chamblee, Georgia

Session **Physical/Chemical Basis of Protein Chemistry**

Chairperson: William G. Soucie, Kraft Research and Development, Glenview, Illinois
 Cochairperson: Charles V. Morr, Clemson University, Clemson, South Carolina

THE STRUCTURE AND COMPLEXITY OF 11S POLYPEPTIDES IN SOYBEANS

N.C. Nielsen, Purdue University, West Lafayette, Indiana

THE IONIC MODIFICATION OF THE SURFACE CHARGE AND ISOELECTRIC POINT OF SOY PROTEIN

W.G. Soucie, W.-S. Chen, Kraft Research and Development, Glenview, Illinois

MODIFICATION OF SURFACE CHARGES OF SOY PROTEIN BY PHOSPHOLIPIDS

W.-S. Chen, W.C. Soucie, Kraft R&D, Glenview, Illinois

EVALUATION OF SOME PHYSIOCHEMICAL PROPERTIES OF CHEMICALLY MODIFIED SOY GLYCININ

W.E. Marshall, J.E. Sanderson, S.M. Gaud, Kraft R&D, Glenview, Illinois

GELATION OF SOY PROTEINS

A.-M. Hermansson, The Swedish Food Institute, Göteborg, Sweden

EFFECTS OF HYDROPHOBICITY, CHARGE AND MOLECULAR STRUCTURE ON SOLUBILITY OF SOY PROTEIN

S. Nakai, S. Hayakawa, E. Li-Chan, University of British Columbia, Vancouver, Canada

CHARACTERIZATION OF THE FILM AND FOAMING PROPERTIES OF SOY PROTEIN FRACTIONS

J.B. German, S.H. Kim, T. O'Neill, J.E. Kinsella, Cornell University, Ithaca, New York

BIOSYNTHESIS AND PROCESSING OF SOYBEAN 7S SEED STORAGE PROTEIN

R.N. Beachy, J.L. Bryant, M.A. Schuler, J.J. Doyle, D. Goedette, Washington University, St. Louis, Missouri

CURRENT ASPECTS OF SOYBEAN PROTEIN FRACTIONATION AND NOMENCLATURE

J.R. Brooks, C.V. Morr, Clemson University, Clemson, South Carolina

Session **Analyses by Iatroscan TLC/FID System**

Chairperson: John K.G. Kramer, Agriculture Canada, Ottawa, Ontario, Canada

CALIBRATION OF THE IATROSCAN-CHROMAROD

SYSTEM FOR MARINE LIPID CLASS ANALYSES

C.C. Parrish, Dalhousie University, Halifax, Nova Scotia, Canada; R.G. Ackman, Canadian Institute of Fisheries Technology, Halifax, Nova Scotia, Canada

A COMPARATIVE EVALUATION OF THE ALCOHOL INDUCED FATTY LIVER BY THE TLC/FID AND GLC METHODS

G.A. Rao, D.E. Riley, R.T. Crane, E.C. Larkin, VA Medical Center, Martinez, California

QUANTITATIVE DETERMINATION OF LIPIDS AND THEIR CONSTITUTIONAL MOIETIES BY CHROMAROD-TLC-FID SYSTEM

T. Itoh, M. Tanaka, H. Kanoko, Kitasato University, Sagamihara, Kanagawa, Japan

CHANGES IN MEMBRANE LIPID CONSTITUENTS IN RBC AFFECTED BY RADICAL PRODUCING SYSTEMS AND THE EFFECT OF TOCOPHEROL AS A RADICAL SCAVENGER

H. Tamai, M. Miki, S. Nakagawa, M. Mino, Osaka Medical College, Takatsuki-City, Japan

IATROSCAN OVERVIEW

J.M. Newman, Newman-Howells Associates Ltd., Winchester, Hants, England

A SPECIFIC DETECTOR FOR NITROGEN HALOGEN COMPOUNDS IN TLC ON COATED QUARTZ RODS

P.L. Patterson, Detector Engineering and Technology Inc., Walnut Creek, California

IMPROVED SAMPLE APPLICATION METHODS FOR THE IATROSCAN

H. Read, British Petroleum Co. PLC, Sunbury-on-Thames, England

EVALUATING THE QUALITATIVE AND QUANTITATIVE ASPECTS OF THE IATROSCAN SYSTEM AND COMPARISON WITH OTHER METHODS

J.K.G. Kramer, E.R. Farnworth, B.K. Thompson, Animal Research Centre, Agriculture Canada, Ottawa, Ontario, Canada

THE USE OF THE IATROSCAN TH-10 ANALYZER TO QUANTIFY TOTAL LIPIDS IN A VARIETY OF SAMPLE TYPES AND CHOLESTEROL, TOTAL BILE SALTS AND TOTAL PHOSPHOLIPIDS IN HUMAN GALLBLADDER BILE

H.R. Harvey, M.W. Rigler and J.S. Patton, University of Georgia, Athens, Georgia

EFFECTS OF TEMPERATURE UPON THE PHOSPHOLIPID COMPOSITION OF GILL TISSUE FROM THERMALLY ACCLIMATED RAINBOW TROUT (*Salmo gairdneri*)

J.R. Hazel, Arizona State University, Tempe, Arizona

QUANTITATIVE CLASS SEPARATION OF COAL LIQUID USING TLC WITH FID

M. Selucky

LIPOPROTEIN LIPID QUANTITATION BY IATROSCAN

R.D. Knapp, B.C. Sherrill, Baylor College of Medicine, Houston, Texas

Meetings

Session **Practical Applications of Biotechnology**

Chairperson: J.B.M. Rattray, University of Guelph, Ontario, Canada

THE BIOMODIFICATION OF FATS AND OILS WITH YEAST

N. Bati, E.G. Hammond*, Iowa State University, Ames, Iowa

PRODUCTION OF PROTEIN AND VOLATILE FATTY ACIDS IN THE FERMENTATION OF BLACKSTRAP MOLASSES BY *Eubacterium rumantium*

K.I. Mehta, Anderson Clayton Foods, Richardson, Texas; C.D. Callihan, Louisiana State University

PLANT-DERIVED CATALYSTS AND PRECURSORS FOR USE IN PROSTAGLANDIN SYNTHESIS

T.J. Ahern, Massachusetts Institute of Technology, Cambridge, Massachusetts

ENZYMIC ESTERIFICATION AND INTERESTERIFICATION

R. Aneja, Cornell University, Ithaca, New York

INDUSTRIAL-SCALE APPLICATION OF ENZYMES TO THE FATS AND OILS INDUSTRY

L.H. Posorske, Novo Laboratories Inc., Wilton, Connecticut

Tuesday, May 1, 1984

Session **Plant Engineering, General**

Chairperson: Frank P. Khym, consultant, San Antonio, Texas

A COMMERCIAL EXPERIENCE OF CONDITIONING RAW SOY FLAKES AT ELEVATED TEMPERATURES PRIOR TO SOLVENT EXTRACTION

N.W. Myers, Myers Engineers, Decatur, Illinois

PRACTICAL RESULTS IN A NEW SUNFLOWER OIL PLANT—IMPROVEMENT OF OIL AND MEAL QUALITY

Z. Leibovitz, C. Ruckenstein*, H.L.S. Ltd., Petah Tikva, Israel

WINTERIZATION OF SELECTIVELY HARDENED SOYBEAN OIL

A. Tirtiaux, Tirtiaux S.A. Fractionnement Tirtiaux, Fleurus, Belgium

HEAT RECOVERY IN THE DEODORIZATION PROCESS

W.B. Hendrix, Sullivan Systems Inc., Larkspur, California

THE PHYSICAL REFINING OF SUNFLOWER OIL

A. Athanassiadis, De Smet Engineering, Edegem, Belgium

CURRENT CAPITAL AND OPERATING COSTS OF SOYBEAN OIL REFINERIES

J.S. Harris, P.A. Bollheimer, PSI Process Systems Inc., Memphis, Tennessee

Session **Nutrition, General**

Chairperson: George U. Liepa, Texas Woman's University, Denton, Texas

Cochairperson: Betty B. Alford, Texas Woman's University, Denton, Texas

HYPERCHOLESTEROLEMIA INDUCED BY DIETARY CASEIN IN RABBITS: INVOLVEMENT OF THE AMINO-ACID COMPOSITION AND STRUCTURE OF CASEIN

C.E. West, Agricultural University, Wageningen, The Netherlands; A.C. Beynen, Agricultural University (Wageningen) and State University, Utrecht, The Netherlands; K.E. Scholz, A.H.M. Terpstra, State University, Utrecht, The Netherlands

NUTRITIONAL INVESTIGATIONS ON JOJOBA (*Simmondsia chinensis*) OIL

J. Decombaz, K. Anantharaman, Nestlé Products, La Tour-de-Peilz, Switzerland; C. Heise, University of California, Berkeley, California

SERUM LIPIDS AND LIPOPROTEINS IN FASTED AND REFED PONIES

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

EFFECT OF THE MODE OF ADMINISTRATION OF LINOLEIC ACID TO PATIENTS WITH CYSTIC FIBROSIS

A. Christophe, E. Robberecht, G. Verdonk, University of Ghent, Ghent, Belgium

CHOLINERGIC STIMULATION OF PHOSPHATIDYL-LINOSITOL TURNOVER IN RETINOBLASTOMA CELLS

D.T. Dudley, A.A. Spector, University of Iowa, Iowa City, Iowa (Honored Student Presentation)

PLASMA CHOLESTEROL AND LIPOPROTEINS AND LDL CLEARANCE IN MINIATURE SWINE FED FATS AND PROTEINS OF VEGETABLE AND ANIMAL ORIGIN

I.S. Walsh, D.C. Beitz, N.L. Jacobson, Iowa State University, Ames, Iowa (Honored Student Presentation)

NEURALLY MEDIATED COMPONENTS OF THE REPRODUCTIVE FAILURE FOLLOWING EXPOSURE TO PERSISTENT, CHLORINATED PESTICIDES

L. Uphouse, Texas Woman's University, Denton, Texas

PRESERVATION OF FOOD PRODUCTS WITHOUT THE USE OF PRESERVATIVES

J.J. Kabara, M.B. Brady, Michigan State University, Lansing, Michigan

THE EFFECT OF PROPRANOLOLON RABBIT ARTERIAL ACAT AND PLASMA LCAT, IN VITRO

F.P. Bell, The Upjohn Company, Kalamazoo, Michigan

ABSORPTION AND DISTRIBUTION OF JOJOBA OIL AFTER ORAL ADMINISTRATION TO RATS

A. Bizzi, M. Cini, Istituto di Ricerche Farmacol., Milano, Italy; U. Bracco, Nestlé, La Tour-de-Peilz, Switzerland

SIGNIFICANCE OF SOYBEAN PROTEIN HYDROLYSATE ON CHOLESTEROL

Meetings

METABOLISM IN RATS

M. Sugano, A. Yashiro, Kyushu University, Fukuoka, Japan

Session Analysis of Waxes

Chairperson: Judd C. Nevenzel, Scripps Institute of Oceanography, La Jolla, California

COMPOSITIONAL ANALYSIS OF NATURAL WAX ESTER MIXTURES BY TANDEM MASS SPECTROMETRY

G.F. Spencer, R.D. Plattner, USDA Northern Regional Research Center, Peoria, Illinois

ANALYSIS OF WAX ESTERS BY GLASS CAPILLARY GAS CHROMATOGRAPHY

S.G. Wakeham, N.M. Frew, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

ANALYSIS OF WAX ESTERS IN MARINE ORGANISMS

J.R. Sargent, A. Fraser, Institute of Marine Biochemistry, Aberdeen, United Kingdom

ANALYSIS OF WAXES FROM VERTEBRATE SKIN

D.T. Downing, M.E. Stewart, P.W. Wertz, S.W. Colton, University of Iowa College of Medicine, Iowa City, Iowa

EDIBLE FISH CONTAINING MARINE WAX ESTERS

A.A. Spark, Chromtek (Pty) Ltd., Cape Town, South Africa; P. Berman, E.H. Harley, University of Cape Town, South Africa

MONOETHYLENIC ISOMERS OF FATTY ALCOHOLS AND ACIDS OF WHITE BARRACUDINA OIL

W.N. Ratnayake, A. Timmins, R.G. Ackman*, Technical University of Nova Scotia, Halifax, Nova Scotia, Canada

SPERM WAX AND DERIVATIVE ANALYSIS

E. Fedeli, C. Mariani, Stazione Sperimentale Oli e Grassi, Milano, Italy

Session Flavor and Oxidation of Fats and Oils

Chairperson: Sherman S. Lin, Anderson Clayton Foods, Plano, Texas

THE FLAVOR INTENSITY OF CARBONYL COMPOUNDS IMPORTANT IN FAT OXIDATION

M. Dixon, E.G. Hammond*, Iowa State University, Ames, Iowa

STRUCTURAL ELUCIDATION OF NOVEL ANTIOXIDANTS ISOLATED FROM ROSEMARY

S.S. Chang, C.-T. Ho, Rutgers University, New Brunswick, New Jersey; C.M. Houlihan, Lever Brothers Co.

EVALUATION OF COOKING OIL PERFORMANCE OF HYDROGENATED SOYBEAN OILS BY SENSORY AND GAS CHROMATOGRAPHIC VOLATILE ANALYSES

E.N. Frankel, K. Warner, K.J. Moulton Sr., J.M. Snyder, USDA Northern Regional Research Center

OXIDATIVE STABILITY OF SOY OIL AT DIFFERENT STAGES OF REFINING

T.-W. Kwon, Korea Advanced Institute of Science and Technology, Seoul, Korea; H.E. Snyder*, H.G. Brown,

University of Arkansas, Fayetteville, Arkansas

OXIDATION OF CHOLESTEROL IN HEATED TALLOW SYSTEMS

T.C. Ryan, J.I. Gray, Michigan State University, East Lansing, Michigan (Ralph G. Potts Fellowship award recipient)

SHELF LIFE OF FRYING FATS FOR FAST FOOD SERVICES

Y.-Y. Gwo, R.L. Ory, G.J. Flick Jr., H.P. Dupuy, Virginia Polytechnic Institute and State University, Blacksburg, Virginia

DEGRADATION OF β -CAROTENE UNDER SIMULATED TIME AND TEMPERATURE CONDITIONS OF PALM OIL DEODORIZATION

P.N. Onyewu, H. Daun, Rutgers University, New Brunswick, New Jersey

THE EFFECT OF SELECTED PLANT STEROLS ON HEATED SOYBEAN OIL

L. Armstrong, P.J. White, Iowa State University, Ames, Iowa

STABILITY OF RICE BRAN OIL DURING DEEP FAT FRYING

L.S. Hwang, I.M. Chiou, National Taiwan University, Taipei, Taiwan

THE EFFECTS OF ADDITIVES AND PACKAGING ENVIRONMENTS ON THE LIPID OXIDATION OF DRY MILK

D.B. Min, Ohio State University, Columbus, Ohio; G. Reineccius, University of Minnesota

Session Surfactants and Detergents I: Performance and Evaluation

Chairperson: Kevin Dillan, Union Carbide, Tarrytown, New York

INTRODUCTION OF SDA WINNERS

T.P. Matson

REDUCTION IN PLUMING DURING THE SPRAY DRYING OF A NONIONIC-BASED HEAVY-DUTY POWDER

D.L. Wherry, E.L. Sones, S.E. McGuire, Conoco Inc.; J. Lovas, Lever Brothers Co.

EFFECTS OF ETHYLENE OXIDE DISTRIBUTION ON NONIONIC SURFACTANT PROPERTIES

K.W. Dillan, Union Carbide Corporation, Tarrytown, New York

THE DEVELOPMENT OF AN OPTIMIZED HEAVY-DUTY LIQUID CONTAINING FABRIC SOFTENER

C.L. Merrill, Shell Development Company, Houston, Texas

DETERGENCY PERFORMANCE COMPARISONS BETWEEN LAS AND ABS USING CALCIUM SULFONATE PRECIPITATION BOUNDARY DIAGRAMS

K.L. Matheson, Conoco Inc., Ponca City, Oklahoma

INTERACTIONS BETWEEN LAS AND NONIONICS

N.F. Borys

Meetings

PEAKED DISTRIBUTION ETHOXYLATES – THEIR PREPARATION, CHARACTERIZATION, AND PERFORMANCE EVALUATION

K.L. Matheson, Conoco Inc., Ponca City, Oklahoma

Session Oil and By-Products from New Crops

Chairperson: John P. Cherry, USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

AGRONOMIC POTENTIAL AND SEED COMPOSITION OF CUPHEA, A NEW OIL CROP

F. Hirsinger, Oregon State University, Corvallis, Oregon

GENERIC PROBLEMS OF DEVELOPING AND MARKETING NEW OILSEED CROPS

E.B. Shultz Jr., Washington University, St. Louis, Missouri

THE CHINESE TALLOW TREE AS A SPECIALTY OILSEED CROP

H.W. Scheld, University of Houston, Houston, Texas

DEVELOPMENT OF NEW HYDROCARBON SOURCES

R.P. Adams, Bio-Renewables Institute Inc., Austin, Texas

BUFFALO GOURD: COMPOSITION AND FUNCTIONALITY OF POTENTIAL FOOD INGREDIENTS

J.C. Scheerens, J.W. Berry, University of Arizona, Tucson, Arizona

PILOT TRIALS ON EXTRACTING OIL AND ALKALOIDS FROM LUPINE WITH ALCOHOLS

L.A. Johnson, J.T. Farnsworth, Texas A&M University, College Station, Texas

CHEMICAL EVALUATION OF *Cucurbita foetidissima* SEED MEAL OBTAINED FROM OIL EXTRACTION BY AN AQUEOUS PROCESS

V. Borghesi S., M. Calebotta D., Santiago de Chile University, Santiago, Chile

EFFECTS OF EXTRUSION UPON SOLUBILITY AND ELECTROPHORETIC BEHAVIOR OF COWPEA PROTEINS

R.D. Phillips, G.P. Burch, University of Georgia, Experiment, Georgia

EFFECTS OF PLANTING DATE AND IRRIGATION ON WAX CONTENT OF SUNFLOWER-SEED OIL

W.H. Morrison III, USDA R.B. Russell Agricultural Research Center, Athens, Georgia; R.E. Sojka, USDA Coastal Plains Soil & Water Conservation Research Center, Florence, South Carolina; P.W. Unger, USDA Southern Conservation & Production Research Lab., Bushland, Texas

NEW CROPS FOR CHEMICALS, FUELS AND MATERIALS

M.O. Bagby, USDA Northern Regional Research Center, Peoria, Illinois

NEEM SEED AS A NATURAL SOURCE OF PESTICIDAL COMPOUNDS

M. Jacobson, USDA Beltsville Agricultural Research Center, Beltsville, Maryland

AVOCADO OIL PRODUCTION: PROBLEMS AND POTENTIALS

R. Huber, Avochem Inc., Santa Paula, California; I. Neeman, Technicon-Israel, Haifa, Israel

ALGAE AS SOURCES OF OIL

S. Lien, K.G. Spencer, Solar Energy Research Institute, Golden, Colorado

PROPERTIES, TRADITIONAL AND POTENTIAL APPLICATIONS OF WINGED BEAN (*Psophocarpus tetragonolobus*)

B.O. Okezie, Alabama A&M University, Normal, Alabama

OIL AND PROTEIN FROM OKRA (*Abelmoschus esculentus* L.) SEED

J.P. Cherry, USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

POLYMER NETWORKS INVOLVING BOTANICAL OILS WITH SPECIAL FUNCTIONAL GROUPS

J.A. Manson, Lehigh University, Bethlehem, Pennsylvania

ALKALOIDS IN PLANTS

D.B. Bills, USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

PROCESSING OF PRODUCTS AND BY-PRODUCTS OF FARM-RAISED CATFISH

D.W. Freeman, USDA Southern Regional Research Center, New Orleans, Louisiana

CRITICAL AGRICULTURAL MATERIALS

R. Wheaton, USDA Domestic Rubber Program, Washington, D.C.

KOCHIA SEEDS AS A SOURCE OF PROTEIN AND OIL

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

Session Poster Session

Chairperson: Frank J. Bell, Upjohn Company, Kalamazoo, Michigan

EFFECT OF THE THERMAL PROCESS ON SOME NUTRITIONAL AND FUNCTIONAL CHARACTERISTICS OF PROTEIN ISOLATES FROM SESAME-SEED PASTES

F.M. Báez, A.L. Arjona, Depto. Ciencia y Tecnología de Alimentos del Instituto Nacional de la Nutrición, Mexico City, Mexico; C.J. Camacho, Instituto Tecnológico de Veracruz, Veracruz, Mexico

MODE OF ENTRY OF *Aspergillus flavus* INTO COTTON TO CAUSE AFLATOXIN IN SEED: EXTERNAL OR INTERNAL?

L.S. Lee, M.A. Klich, USDA Southern Regional Research Center, New Orleans, Louisiana

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CONTAINING COTTONSEED MEAL

L.S. Lee, S.P. Koltun, J.B. Stanley, USDA Southern Regional Research Center, New Orleans, Louisiana

INFLUENCE OF FUNGAL INFECTION ON WHEAT KERNELS, SOYBEAN SEEDS AND SESAME SEEDS

R.S. Farah, F.A. Khalil, A.E. Basyony, Cairo University, Giza, Egypt

DETECTION OF HEXANE AND OTHER VOLATILE HYDROCARBONS WITH COATED PIEZOELECTRIC CRYSTALS

T.J. Jacks, T.P. Hensarling, USDA Southern Regional Research Center, New Orleans, Louisiana

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R.E. Worthington, J. Miller, University of Georgia Experiment Station, Experiment, Georgia

POSSIBILITIES AND LIMITATION OF THE GAS CHROMATOGRAPHIC SEPARATION OF TRIGLYCERIDES WITH CAPILLARY COLUMNS

E. Schulte, University of Muenster, Muenster, West Germany

ENZYMIC SYNTHESIS OF CARBOHYDRATE ESTERS OF FATTY ACID

H. Seino, T. Uchibori*, Kitasato University, Kanagawa, Japan; T. Nishitani, S. Inamasu, Dai-Ichi Kogyo Seiyaku Co. Ltd., Japan

LIPID, STEROL, CHOLESTEROL AND FATTY ACID CONTENTS OF SQUID, OYSTERS, CLAMS AND MUSSELS

R.G. Jensen, R.A. Ferraini, University of Connecticut, Storrs, Connecticut

HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY OF THE CAROTENOIDS IN CORN GRAIN

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

THE OIL COMPOSITION OF TWO ANNUAL SPURGES

P.C. Polyzou, J.B.M. Rattray*, J.F. Alex, G.W. Anderson, University of Guelph, Guelph, Ontario, Canada

PHYSICAL, CHEMICAL AND FUNCTIONAL PROPERTY CHANGES IN STORED SOY PROTEIN CONCENTRATE AND SOY PROTEIN ISOLATE

M.J. Kaing, M.H. Love*, Iowa State University, Ames, Iowa

Session Regulation of Prostaglandins and Other Eicosanoids

Chairperson: Stephen M. Prescott, University of Utah, Salt Lake City, Utah

RETINOIC ACID AND PROSTAGLANDIN E₂ PRODUCTION BY HUMAN SKIN FIBROBLASTS

R. Batres, J. Dupont, Iowa State University, Ames, Iowa

THE REGULATION OF ARACHIDONATE RELEASE AND HUMAN PARTURITION

J.M. Johnson, University of Texas Health Science Center, Dallas, Texas

INCORPORATION AND METABOLISM OF LONG-CHAIN POLYENOIC FATTY ACIDS BY PLATELETS

H.W. Sprecher, Ohio State University, Columbus, Ohio

THE EFFECT OF EICOSAPENTAENOIC ACID ON THE LEUKOTRIENE B PATHWAY IN HUMAN NEUTROPHILS

S.M. Prescott, University of Utah, Salt Lake City, Utah

ROLE OF ARACHIDONOYL-CoA SYNTHETASE IN EICOSANOID PRECURSOR UPTAKE AND RELEASE

E.J. Neufeld, P.W. Majerus, Washington University, St. Louis, Missouri; H.W. Sprecher, Ohio State University, Columbus, Ohio

Session Trends in Industrial Usage for Vegetable Oils

Chairperson: Everett H. Pryde, USDA Northern Regional Research Center, Peoria, Illinois

THERMOCHEMICAL APPLIES FOR FATS AND OILS

E.S. Lipinsky, D. Anson, J.R. Longanbach, Battelle Columbus Laboratories, Columbus, Ohio

GRAFT POLYOLS OF CASTOR OIL

M. Brauer, F. Naughton, D. Simone, CasChem Inc., Bayonne, New Jersey

SULFURIZED VEGETABLE OIL PRODUCTS AS LUBRICANT ADDITIVES

K. Kammann, A. Phillips, Keil Chemical Division of Ferro Corporation, Hammond, Indiana

USES OF SOYBEAN OIL IN THE APPLICATION OF HERBICIDES

G. Kapusta, Southern Illinois University, Carbondale, Illinois

TRENDS IN THE INDUSTRIAL USE OF VEGETABLE OILS IN COATINGS

R.W. Fulmer, Cargill Inc., Minneapolis, Minnesota

SOYBEAN OIL AND ITS SOAPSTOCKS AND PHYSICAL DISTILLATES—THE GROWING POTENTIAL

N.O.V. Sonntag, consultant, Red Oak, Texas

CHEMICAL EPOXIDATION OF *Vernonia galamensis* OIL, A NATURAL EPOXY-SEED OIL

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

RICINOLEATE-BASED POLYURETHANES IN TELECOMMUNICATION APPLICATIONS

F. Naughton, CasChem Inc., Bayonne, New Jersey

RICINOLEATE-BASED POLYURETHANES IN BIOMEDICAL APPLICATIONS

J. Chu, CasChem Inc., Bayonne, New Jersey

STABILITY STUDIES ON SUNFLOWER-SEED OIL METHYL AND ETHYL FATTY ACID ESTERS

L.M. Du Plessis, J.B.M. De Villiers, W.H. Van Der Walt, National Food Research Institute, Pretoria, South Africa

Session Dietary Lipid in Health and Disease

Chairperson: Nancy DiMarco, Texas Woman's University, Denton, Texas

Meetings

EFFECT OF ETHYL LINOLENATE AND LINOLEATE ADMINISTRATION ON LIVER PHOSPHOLIPID FATTY ACID COMPOSITION IN EFA-DEFICIENT RATS

Y.S. Huan, D.F. Horrobin, M.S. Manku*, Efamol Research Institute, Kentville, Nova Scotia, Canada

INFLUENCE OF DIETARY ELAIDIC ACID ON THE LIPID COMPOSITION, PHYSICAL AND FUNCTIONAL PROPERTIES OF RAT MITOCHONDRIA

B. Entressangles, N. Combe, R. Wolff, ITERG, Talence Cedex, France

TISSUE CHOLESTEROL CONCENTRATION OF YOUNG PIGS FED BEEF, SOY AND CONVENTIONAL DIETS

D.A. Diersen-Schade, M.J. Richard, D.C. Beitz, N.L. Jacobson, Iowa State University, Ames, Iowa

IN VIVO DISTRIBUTION OF *trans*- AND *cis*-10-OCTADECENOIC ACID ISOMERS IN HUMAN PLASMA LIPIDS

E.A. Emken, W.K. Rohwedder, R.O. Adlof, W.J. DeJarlais, USDA Northern Regional Research Center, Peoria, Illinois; R.M. Gulley, St. Francis Medical Center, Peoria, Illinois

ROLE OF SOY PHOSPHOLIPID FRACTIONS IN BIOAVAILABILITY OF DIETARY LIPID

T.R. Watkins, City University of New York, New York, New York

GEOMETRICAL AND POSITIONAL FATTY ACID ISOMERS IN THE HUMAN DIET

M.A. Amer, McGill University, Montreal, Quebec, Canada

THE EFFECT OF DIETARY *trans* FATTY ACIDS ON ENERGETIC EFFICIENCY AND MITOCHONDRIAL FUNCTION

R. De Schrijver, University of Ghent, Merelbeke, Belgium

HYPER- AND HYPO-RESPONSIVE INDIVIDUALS TO DIETARY CHOLESTEROL AMONG LABORATORY ANIMALS AND HUMANS

A.C. Beynen, University of Utrecht, Utrecht, The Netherlands; M.S. Katan, L.F.M. van Zutphen, Agricultural University, Wageningen, The Netherlands

EFFECTS OF DIETARY ISOMERIC FATTY ACIDS ON PLATELET MEMBRANE COMPOSITION AND FUNCTION AND HEPATIC FATTY ACID DESATURATION IN THE RAT

R. Blomstrand, Karolinska Institutet, Huddinge, Sweden; L. Svensson, KabiVitrum AB, Stockholm, Sweden; L. Sisfontes, U. Diczfalusy, B. Lindbäck, Huddinge University Hospital, Huddinge, Sweden

Session **Plant Engineering, General**

Chairperson: Walter E. Farr, Anderson Clayton & Co., Houston, Texas

INSTANT NOODLES PROCESSING

S.-S. Chen, Palm Oil Research Institute of Malaysia, Kuala Lumpur, Malaysia

HOW SUCCESSFUL IS IBP'S DUAL BED FBC?

R.S. Sadowski, WEI, Woburn, Massachusetts

ENERGY-HEAT CONSERVATION IN TANKS CONTAINING VEGETABLE FATS

A.S. Monge

EXTENSION OF VEGETABLE OIL USING HYDROGENATED FISH OIL

L.J. Morales, I.J. Sueyoshi, R.H. Bourges, National Institute of Nutrition, Mexico City, Mexico

MIVAC (MICROWAVE VACUUM) PROCESSOR

S. Dada, Continental Grain Co., New York, New York; H.E. Bland, Aeroglide Corporation, Raleigh, North Carolina; H.F. McKinney, McDonnell Aircraft Co., St. Louis, Missouri

AN ECONOMIC ANALYSIS OF MILLING COTTONSEED WITH DIFFERENT RESIDUAL LINTERS CONTENTS

J.T. Farnsworth, L.A. Johnson, E.W. Lusas, Texas A&M University, College Station, Texas; R.J. Hron, USDA Southern Regional Research Center, New Orleans, Louisiana

INEDIBLE RENDERING SYSTEMS WITH REDUCED ENERGY USAGE

W.H. Prokop, National Renderers Association, Des Plaines, Illinois

A DIFFERENT APPROACH TO HOT DEHULLING

H. Stricker, Buhler-Miag Inc., Minneapolis, Minnesota

Session **Surfactants and Detergents II: Performance and Evaluation (continued)**

Chairperson: L. Kravetz, Shell Development, Houston, Texas

USE OF ENZYMES TO IMPROVE WASH PERFORMANCE AT LOW TEMPERATURES

D. Kochavi, J.M. Monnier, Novo Laboratories, Wilton, Connecticut

EVALUATION OF MULTI-FUNCTIONAL BENEFITS OF POLYACRYLATE POLYMERS IN DETERGENT COMPOSITIONS

M.K. Nagarajan, B.F. Goodrich Chemical Group, Avon Lake, Ohio

THE ROLE OF NITROGEN IN A MULTIORGANISM STRATEGY FOR BIOSURFACTANT PRODUCTION

N. Kosaric, W.L. Cairns*, N.C.C. Gray, D. Stechey, J. Wood, University of Western Ontario, London, Ontario, Canada

ANTIFUNGAL PROPERTIES OF 3-*n*-Alkyn-1-ols

H. Gershon, Boyce Thompson Institute, Ithaca, New York

EFFECT OF SURFACTANT STRUCTURE ON STABILITY OF ENZYMES FORMULATED INTO LAUNDRY LIQUIDS

L. Kravetz, K.F. Guin, Shell Development Company, Houston, Texas

HOW CAPILLARY PRESSURE AFFECTS THE PRODUCTION WELL

E.C. Donaldson, University of Oklahoma, Norman, Oklahoma

Meetings

ASPHALTENE AND WATER ADSORPTION ON CLAYS
J.L. McAtee Jr., K. Dean, Baylor University, Waco,
Texas

Wednesday, May 2, 1984

Session **New Developments in Anti-nutritional Factors: Trypsin Inhibitors**
Chairperson: Joseph J. Rackis, USDA Northern
Regional Research Center, Peoria, Illinois

THE EFFECT OF FEEDING SOYBEAN TRYPSIN
INHIBITOR AND REPEATED INJECTIONS OF
CHOLECYSTOKININ ON RAT PANCREAS
S. Temler, C. Dormond, E. Simond, B. Morel, Nestlé,
La Tour-de-Peilz, Switzerland

THE EFFECTS OF LONG-TERM SOY AND MILK
PROTEIN FEEDING ON THE PANCREAS OF *Cebus*
albifrons MONKEYS

L.M. Ausman, Tufts University, Medford, Massachusetts;
J.P. Harwood, FDA, Washington, D.C.; N.W. King, P.K.
Sehgal, R.J. Nicolosi, Harvard Medical School, South-
borough, Massachusetts; I.E. Liener, D. Donatucci,
J. Tarcza, University of Minnesota, St. Paul, Minnesota

COMPARATIVE RESPONSE OF RATS, MONKEYS AND
PIGS TO RAW OR HEATED SOY FLOUR OR CASEIN
DIETS AND CHOLECYSTOKININ INJECTION
B.J. Struthers, G.D. Searle Co., Skokie, Illinois

PROTEIN EFFICIENCY RATIOS OF DIETS CONTAIN-
ING TRYPSIN INHIBITOR FROM SOY AND POTATOES
E.C. Baker, USDA Northern Regional Research Center,
Peoria, Illinois; M.R. Gumbmann, USDA Western
Regional Research Center, Albany, California

BIOCHEMICAL AND BIOLOGICAL PROPERTIES OF
WINGED BEAN TRYPSIN INHIBITOR
B.O. De Lumen, University of California, Berkeley,
California

PROTEINASE INHIBITORS FROM POTATOES:
STRUCTURAL, FUNCTIONAL AND ANTI-
NUTRITIONAL PROPERTIES
C.A. Ryan, Washington State University, Pullman,
Washington

A PEPTIDE TEST FOR PANCREATIC FUNCTION AND
ITS APPLICATION TO THE EFFECT OF TRYPSIN
INHIBITORS ON THE PANCREAS OF THE RAT
S.S. Lee, Emory University, Atlanta, Georgia; I.E.
Liener*, University of Minnesota, St. Paul, Minnesota

INTERACTION OF DIETARY FAT AND SOYBEAN
ISOLATE ON AZASERINE-INDUCED PANCREATIC
CARCINOGENESIS
B.D. Roebuck, P.V. Kaplita, Dartmouth Medical
School, Hanover, New Hampshire

CHEMISTRY OF LEGUME PROTEASE INHIBITORS
AND THEIR USE IN TAXONOMY
J.K.P. Weder, Technical University of Munich, Garching,
West Germany

Session **Physical Properties of Oils**
Chairperson: David N. Holcomb, Kraft Inc.
Research and Development, Glenview, Illinois;
Co-chairperson: Peter J. Wan, Anderson Clayton
Foods, Richardson, Texas

COMPUTER MODELING OF α - AND β -FORM PHASE
TRANSITIONS USING THEORETICAL TRIGLYCERIDE
STRUCTURE
J.W. Hagemann, USDA Northern Regional Research
Center, Peoria, Illinois

PHYSICAL PROPERTY RELATIONSHIPS BETWEEN
PHOSPHOLIPIDS AND CHAIN-EQUIVALENT
GLYCERIDES
T.D. Simpson, USDA Northern Regional Research
Center, Peoria, Illinois

ADSORPTION OF SOY OIL PHOSPHOLIPIDS ON SILICA
H.G. Brown, H.E. Snyder, University of Arkansas,
Fayetteville, Arkansas

STRUCTURAL MORPHOLOGY OF BLOOD ON CON-
FECTIONERY COATINGS PREPARED WITH COCOA
BUTTER EXTENDERS
R. Delaney, Durkee Foods Division/SCM Corporation,
Strongsville, Ohio

COMMERCIAL MARGARINE PRODUCTS – AN
ANALYTICAL SURVEY
Y.K. Teah, M.S.A. Kheiri, K. Ahmad, K.G. Berger, Palm
Oil Research Institute of Malaysia, Kuala Lumpur,
Malaysia

THERMAL ANALYSIS AND ITS APPLICATION TO
LIPID PHASE TRANSITIONS
J.W. Hampson, USDA Eastern Regional Research
Center, Philadelphia, Pennsylvania

Session **Automation Process and Control**
Chairperson: Roy A. Carr, Canbra Foods Ltd.,
Lethbridge, Alberta, Canada

SEPARATION AND DETERMINATION OF TRIGLY-
CERIDES ACCORDING TO CHAIN LENGTH AND
DEGREE OF UNSATURATION BY COMBINED LC/GC,
PART II
D.E. Moore, J.T. Olejko, Durkee Foods/SCM Corporation
Strongsville, Ohio

APPLICATION OF A COMPUTER-BASED DATA
ACQUISITION SYSTEM IN SOAP MANUFACTURING
PILOT PLANT
C.F. Irwin, Lever Brothers Company, Edgewater, New
Jersey

THE APPLICATION OF VERY HIGH ACCURACY GC
ANALYSIS AS AN AID TO FAST AND RELIABLE
CONTROL OF OIL REFINERY OPERATION
J.D. Craske, C.D. Bannon, Ngo Trong Hai, J. Demmead,
K. O'Rourke, Unilever Australia Ltd., Balmain, New
South Wales, Australia

OIL STABILITY INDEX
A. Buck, M. Matlock, Archer Daniels Midland Co.,
Clinton, Iowa

Meetings

AUTOMATION IN THE OIL MILLING INDUSTRY

K. Jokinen, Raisio Tehtaat, Raisio, Finland

PROCESS CONTROL AND AUTOMATION OF EDIBLE OIL REFINERIES

D.W. Foster, A.J. Harper, Simon-Rosedowns Ltd., Hull, United Kingdom

AUTOMATED SOLID FAT CONTENT MEASUREMENT USING A MICROCOMPUTER-CONTROLLED ROBOTIC SYSTEM

B.L. Madison, G.D. Owens, S.M. Edghill, R.J. Eckstein, The Procter & Gamble Co., Cincinnati, Ohio

Session **Supercritical Chromatography**

Chairperson: Jerry W. King, CPC International, Argo, Illinois

SUPERCritical FLUID CHROMATOGRAPHY MEASUREMENTS – IMPLICATIONS FOR CRITICAL FLUID EXTRACTION

J.W. King/CPC International, Argo, Illinois

DENSE GAS SOLUBILITY MEASUREMENTS

L.M. Bowman Jr., Syntex Ophthalmics, Phoenix, Arizona; J.C. Giddings, M.N. Myers, University of Utah, Salt Lake City, Utah

SUPERCritical FLUID CHROMATOGRAPHY

D.R. Gere, Hewlett-Packard, Avondale, Pennsylvania

CAPILLARY SUPERCRITICAL FLUID CHROMATOGRAPHY

M.L. Lee, Brigham Young University, Provo, Utah

ANALYTICAL APPLICATIONS OF SUPERCRITICAL FLUIDS: CAPILLARY COLUMN CHROMATOGRAPHY AND MASS SPECTROMETRY

R.D. Smith, B.W. Wright, C.R. Yonker, H.R. Udseth, Battelle Pacific Northwest Laboratories, Richland, Washington

SFC/FTIR: DEVELOPMENT AND APPLICATIONS

K.H. Shafer, P.R. Griffiths, University of California, Riverside, California

Session **Surfactants and Detergents Symposium on Wetting**

Chairperson: John Meister, Southern Methodist University, Dallas, Texas

SOIL WETTING AGENTS FROM OXYETHYLATED AMIDES

T.J. Micich, W.M. Linfield, USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

PHYSICO-CHEMICAL ANALYSIS OF THE RESERVOIR WETTING PROBLEM

J.C. Melrose, Mobil Research and Development Corporation, Dallas, Texas

WETTING OF POWDERS AND ITS RELEVANCE TO THE DISPERSION PROCESS

G.D. Parfitt, R. Ayala, Carnegie-Mellon University, Pittsburgh, Pennsylvania

EFFECT OF MOLECULAR STRUCTURE ON THE

ABSORPTION OF ALKYLARYLSULFONATES AT AIR-WATER OR HYDROCARBON-WATER BOUNDARIES
J.J. Meister, Southern Methodist University, Dallas, Texas

WETTABILITY MODIFICATION OF METAL OXIDES BY ALCOHOL ADSORPTION

W.H. Wade, University of Texas, Austin, Texas

WETTING KINETICS: AN OVERVIEW

P. Neogi

OBSERVATIONS ON WETTING CONDITIONS INDUCED BY CRUDE OIL

J. Ward, N.R. Morrow, New Mexico Petroleum Recovery Research Center, Socorro, New Mexico

Session **Novel Development in GLC**

Chairperson: Andrew A. Spark, Chromtek (Pty) Ltd., Cape Town, South Africa

SEPARATION AND DETERMINATION OF TRIGLYCERIDES ACCORDING TO CHAIN LENGTH AND DEGREE OF UNSATURATION BY COMBINED LC/GC, PART I

D.E. Moore, Durkee Foods/SCM Corporation, Strongsville, Ohio

THE POTENTIAL OF CARBOWAX-20M BONDED IN FLEXIBLE FUSED SILICA WCOT COLUMNS AS THE STANDARD FOR INTERLABORATORY COMPARISONS OF FATTY ACIDS

R.G. Ackman, Canadian Institute of Fisheries Technology, Halifax, Nova Scotia, Canada

SEPARATION OF *cis/trans* AND POSITIONAL ISOMERS OF UNSATURATED FATTY ACID METHYL ESTERS BY CAPILLARY GC

E. Schulte, University of Muenster, Muenster, West Germany

ANALYSIS OF AUTOXIDIZED FATS BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY. HOMOLYTIC CLEAVAGE PRODUCTS OF MONO- AND DIHYDROPEROXIDES AND BICYCLOENDOPEROXIDES OF METHYL LINOLENATE

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

RECENT ADVANCES IN FUSED SILICA COLUMN TECHNOLOGY

R.R. Freeman, Hewlett-Packard, Avondale, Pennsylvania

FUSED SILICA CAPILLARY GAS CHROMATOGRAPHY: THE STATE OF THE ART

W. Jennings, University of California, Davis, California

SPECIAL TESTING IMPROVES EQUIVALENT CHAIN LENGTH REPRODUCIBILITY FOR FAME CAPILLARY COLUMNS

L.M. Sidisky, P.H. Silvis, W.F. Fatula, Supelco Inc., Bellefonte, Pennsylvania

NEW DEVELOPMENTS IN GLC

W. Bertsch, University of Alabama, Tuscaloosa, Alabama; A.A. Spark, Laboratory Analytical Services, Cape Town, South Africa

Meetings

COMPOSITIONAL ANALYSIS OF COMMERCIAL FATS AND OILS BY CAPILLARY GAS CHROMATOGRAPHY AND TRADITIONAL METHODS

B.L. Madison, R.A. DePalma, J.C. Henderson, The Procter & Gamble Co., Cincinnati, Ohio

Session **New Developments in Anti-nutritional Factors: Others**

Chairperson: Timothy L. Mounts, USDA Northern Regional Research Center, Peoria, Illinois

AFLATOXIN CONTENT OF PEANUT HULLS

T.H. Sanders, J.L. McMeans, USDA National Peanut Research Laboratory, Dawson, Georgia

ANALYSIS OF TRYPSIN INHIBITORS IN SOY PRODUCTS: EVALUATION OF METHODOLOGY AND IMPROVEMENTS

W.F. Lehnhardt, H.G. Dills, A.E. Staley Mfg. Co., Decatur, Illinois

ARE TOASTED SOYBEAN FLOUR PROTEINS RESPONSIBLE FOR TRYPSIN INHIBITOR ACTIVITY?

D.J. Sessa, USDA Northern Regional Research Center, Peoria, Illinois

PROTEOLYSIS OF TRYPSIN INHIBITORS DURING THE GERMINATION OF LEGUME SEEDS

K.A. Wilson, A.L. Tan-Wilson, State University of New York, Binghamton, New York

ENZYME INHIBITORS IN DRY BEANS

S.K. Sathe, University of Arizona, Tucson, Arizona; S.S. Deshpande, University of Illinois

CHARACTERISTICS OF α -AMYLASE INHIBITORS IN *Phaseolus vulgaris* BIOTYPES

R. Hoover, F. Sosulski, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

THE BIOLOGICAL UTILIZATION OF SULFUR AMINO ACID ISOMERS AND DERIVATIVES

M. Friedman, M.R. Gumbmann, USDA Western Regional Research Center, Berkeley, California

DRY BEAN TANNINS: NUTRITIONAL IMPLICATIONS

N.R. Reddy, Virginia Polytechnical Institute and State University, Blacksburg, Virginia; S.K. Sathe, University of Arizona; D.K. Salunkhe, MPAU, Rahuri, India

RECENT DEVELOPMENTS IN THE ASSAY AND CHARACTERIZATION OF TANNIN IN SORGHUM GRAIN

L.G. Butler, Purdue University, West Lafayette, Indiana

Session **New Crops and Processes**

Chairperson: Edmund W. Lusas, Texas A&M University, College Station, Texas

TEXTURED PEANUT PROTEIN: A RESPONSE SURFACE METHODOLOGY

T. Trejo, E. Ríos, M. Hernández, J.L. Camacho, National Institute of Nutrition, Mexico City, Mexico

PARTIALLY DEFATTED PEANUTS: COST ANALYSIS

K.M. Decossas, J. Pominski, USDA Southern Regional Research Center, New Orleans, Louisiana

PROCESSING OF *Crambe abyssinica* SEED IN COMMERCIAL OILSEED EXTRACTION FACILITIES

K.D. Carlson, E.C. Baker, G.C. Mustakas, USDA Northern Regional Research Center, Peoria, Illinois

A NATURAL ANTHOCYANIN COLOR ADDITIVE FOR REPLACEMENT OF THE DELISTED ARTIFICIAL DYES AND THE USE OF FLAVONID CHEMICAL MARKERS FOR GERMLASM IDENTIFICATION

S. Asen, USDA Florist and Nursery Crops Laboratory, Beltsville, Maryland

INEDIBLE RENDERING SYSTEMS WITH REDUCED ENERGY USAGE

W.H. Prokop, National Renderers Association Inc., Des Plaines, Illinois

PREPARATION, COMPOSITION, AND UTILIZATION OF RICE BRAN OIL, AND ITS POTENTIAL EXPLOITATION FROM STABILIZED RICE BRAN

R.M. Saunders, R.N. Sayre, USDA Western Regional Research Center, Albany, California

EXTRACTION OF RUBBER FROM GUAYULE

C.R. Engler, T.J. Smith, Texas A&M University, College Station, Texas

MANUFACTURING PLANT EXTRACTIVES, THE STATE OF THE ART TECHNOLOGIES

J. Pelaez, McCormick & Co. Inc., Hunt Valley, Maryland

MODERN FISH OIL AND MEAL PROCESSING

A.Ø. Utvik, Stord Bartz a.s., Bergen, Norway

Session **Color Problems: Science and Technology**

Chairperson: Edwin N. Frankel, USDA Northern Regional Research Center, Peoria, Illinois

A STUDY OF THE CAUSE OF RAPID COLOR DEVELOPMENT OF HEATED REFINED PALM OIL

Y.A. Tan, S.H. Ong, Palm Oil Research Institute of Malaysia, Kuala Lumpur, Malaysia

THE HISTORY, PRESENT STATUS, AND FUTURE USES OF FOOD COLOR MEASUREMENTS

R.S. Hunter, Hunter Associates Laboratory Inc., Reston, Virginia

CHARACTERISTICS AND FOOD APPLICATIONS OF COMMERCIALY AVAILABLE SYNTHETIC CAROTENOIDS

H.T. Gordon, Hoffmann-La Roche Inc., Nutley, New Jersey

A CHLOROPHYLL-SELECTIVE BLEACHING CLAY: CONTRAST IN CHLOROPHYLL REMOVAL FROM SOYA AND CANOLA OIL

D.R. Taylor, C.B. Ungermann, Kaiser Aluminum & Chemical, Pleasanton, California

EFFECT OF COLOR ON FLAVOR JUDGMENTS OF FOOD

Meetings

C.M. Christensen, Monell Chemical Senses Center,
Philadelphia, Pennsylvania

PIGMENTS AND PIGMENT-ARTIFACTS IN COTTONSEED

A.A. Bell, R.D. Stipanovic, USDA Natl. Cotton Path.
Res. Lab., College Station, Texas

DISCOLORATION IN FOOD PRODUCTS SUPPLE-
MENTED WITH EDIBLE COTTONSEED FLOURS
F.A. Blouin, Z.M. Zarins, USDA Southern Regional
Research Center, New Orleans, Louisiana

Session **Analytical Chemistry, General**
Chairperson: Robert G. Ackman, Canadian
Institute of Fisheries Technology, Halifax,
Nova Scotia, Canada

ESTIMATION OF THE COMPOSITION OF EDIBLE OIL MIXTURES

P.J. Van Niekerk, A.E.C. Burger, W.H. Van Der Walt,
National Food Research Institute, Pretoria, South Africa

HPLC-MS-COMPUTER ANALYSIS OF LIPIDS

W.L. Erdahl, F.C. Phillips, D.E. Jarvis, O.S. Privett, The
Hormel Institute, Austin, Minnesota

QUANTITATIVE ANALYSIS OF THE TRIGLYCERIDE SPECIES OF VEGETABLE OILS

F.C. Phillips, W.L. Erdahl, The Hormel Institute, Austin,
Minnesota; J.A. Schmit, E.I. du Pont de Nemours & Co.;
O.S. Privett, The Hormel Institute

A RAPID HPLC METHOD FOR TOCOPHEROL ISOMERS
C.-S. J. Shen, A.J. Sheppard, Food and Drug Administra-
tion, Washington, D.C.

A NEW INSTRUMENT FOR CHARACTERIZATION OF MELTING AND CRYSTALLIZATION BEHAVIOR

M. Kutter, G. Paul, Mettler Instrument Corp., Hight-
stown, New Jersey; P. Schauwecker, Mettler Instru-
ments AG, Greifensee, Switzerland

MOISTURE DETERMINATION IN OILS AND FATS

T. Fossum, M. Kutter, Mettler Instruments Corp.,
Hightstown, New Jersey; K. Mooibroek, Mettler Instru-
ments AG, Greifensee, Switzerland

ANALYSIS OF ALKYNES AND ALKYNIC ACIDS BY OZONE OR RUTHENIUM OXIDE OXIDATION

Ł.S. Silbert, T.A. Foglia, USDA Eastern Regional
Research Center, Philadelphia, Pennsylvania

A NEW RAPID METHOD OF DETERMINING PHOSPHORUS LEVELS IN VEGETABLE OILS

B. Berck, University of Manitoba, Winnipeg, Manitoba,
Canada

DETERMINATION OF VOLATILE SULFUR COMPOUNDS IN CANOLA OIL

V. Abraham, J.M. deMan, University of Guelph, Ontario,
Canada

LIPID QUALITY CHROMATOGRAPHICALLY DEFINED
AND MEASURED BY NEAR INFRARED TECHNIQUES
D.L. Wetzler, Kansas State University, Manhattan, Kansas

THE DETERMINATION OF UNREACTED AMINES IN

AMINE OXIDES BY POTENTIOMETRIC TITRATION
C.N. Wang, L.D. Metcalfe, Arma Co., McCook, Illinois

Session **Computer Technology (Lab)**
Chairperson: Michael M. Blumenthal, Libra
Laboratories Inc., Metuchen, New Jersey

RESEARCH SUPPORT SYSTEMS

A.W. Davis, N.S. Vidyashanker, Data Translation Inc.,
Marlboro, Massachusetts

FATE OF A FRENCH FRY

K.G. Krul, Beckman Instruments Inc.

COMPUTER-AIDED LABORATORY DATA MANAGEMENT

W. Kipiniak, Computer Inquiry Systems Inc., Waldwick,
New Jersey

LABORATORY MANAGEMENT: THE GOAL OF LABORATORY COMPUTERIZATION

J.V. Hornstein, S. Chase, N. Birnbaum, Perkin Elmer
Inc., Norwalk, Connecticut

LABORATORY WORK STATION SYSTEM FOR PERSONAL COMPUTER

L.A. Kutchins, Dynamic Solution Corp., Pasadena,
California

A NEW LABORATORY DATABASE SYSTEM FOR VAX-11 COMPUTERS

A.C. Brown III, Varian Instruments, Walnut Creek,
California

Session **Supercritical System and Technique**
Chairperson: John P. Friedrich, USDA Northern
Regional Research Center, Peoria, Illinois

CRITICAL FLUID EXTRACTION OF VEGETABLE OILS
J.M. Moses, Critical Fluid Systems Inc., Cambridge,
Massachusetts

SUPERCRITICAL CO₂ EXTRACTION OF JOJOBA

J.P. Friedrich, G.R. List, G.F. Spencer, USDA Northern
Regional Research Center, Peoria, Illinois

IN SITU CHEMICAL TRANSFORMATIONS DURING
SUPERCRITICAL FLUID EXTRACTION OF SEED OILS
T.G. Squires, T. Aida, Iowa State University, Ames,
Iowa

DEVELOPMENT OF INDUSTRIAL PROCESSES USING SUPERCRITICAL FLUIDS, APPLIED TO FOOD AND NATURAL PRODUCTS

R.J. Robey, S. Sunder*, Air Products and Chemicals
Inc., Allentown, Pennsylvania

HIGH-PRESSURE EQUIPMENT SELECTION AND
CAPITAL COST CONSIDERATIONS IN THE DESIGN OF
SUPERCRITICAL EXTRACTION PILOT PLANTS AND
COMMERCIAL UNITS

R.S. Cohen, Autoclave Engineers Inc., Erie, Pennsylvania

SUPERCRITICAL FLUID FRACTIONATION OF FISH
OILS—CONCENTRATION OF EICOSAPENTAENOIC
ACID

V. Krukonic, Phasex Corp., Nashua, New Hampshire

Meetings

INFLUENCE OF SUPERCRITICAL CARBON DIOXIDE ON PROTEINS

J.K.P. Weder, Technical University of Munich, Garching, West Germany

Thursday, May 3, 1984

Session **Biochemistry, General**

Chairperson: Randall Wood, Texas A&M University, College Station, Texas

LIPIDS IN ECOLOGY

H.W. Kircher, S.M. Duperret, University of Arizona, Tucson, Arizona

CHANGES IN MEMBRANE LIPID CONSTITUENTS IN RBC AFFECTED BY RADICAL PRODUCING SYSTEMS AND THE EFFECT OF TOCOPHEROL AS A RADICAL SCAVENGER

H. Tamai, M. Miki, S. Nakagawa, M. Miwa, Osaka Medical College, Takatauki-City, Japan

PARTIAL SPECIFIC VOLUME AND PREFERENTIAL HYDRATION OF LDL SUBFRACTIONS

T.S. Kahlon, G.L. Adamson, L.L. Glines, J.R. Orr, F.T. Lindgren, University of California, Berkeley, California

MEMBRANE CHOLESTEROL OXIDATION AND CHOLESTEROL EXPOCIDIC FORMATION

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

FATTY ACID COMPOSITION OF RAT MILK DURING LACTATION

J. Bitman, D.L. Wood, U.S. Department of Agriculture, Beltsville, Maryland; C.S. Fink, T.H. Liao, P. Hamosh, M. Hamosh, Georgetown University Medical Center, Washington, D.C.

ISOLATION AND CHARACTERIZATION OF POLYPRENOLS FROM SEEDS

K. Ravi, J.W. Rip, K.K. Carroll, University of Western Ontario, London, Ontario, Canada (Honored Student Presentation)

INTERRELATIONSHIPS IN THE METABOLISM OF PLATELET ACTIVATING FACTOR AND ARACHIDONIC ACID IN NEUTROPHILS

R. L. Wykle, Bowman Gray School of Medicine, Winston-Salem, North Carolina

Session **Dietary Lipid in Health and Disease**

Chairperson: Nancy DiMarco, Texas Woman's University, Denton, Texas

BIOCHEMICAL PATTERNS OF EFA DEPLETION AND REPLETION

E.G. Hill, B.A. Svingen, R.T. Holman*, The Hormel Institute, Austin, Minnesota

EFFECT OF THE CHEMICAL FORM OR THE MODE OF ADMINISTRATION OF ESSENTIAL FATTY ACIDS ON THEIR FURTHER METABOLISM

A. Christophe, E.G. Hill, R.T. Holman, The Hormel Institute, Austin, Minnesota

FATTY ACID COMPOSITION OF THE MAJOR SERUM LIPID CLASSES IN PATIENTS WITH CYSTIC FIBROSIS AND IN THEIR PARENTS

A. Christophe, The Hormel Institute, Austin, Minnesota; W.J. Warwick, University of Minnesota; R.T. Holman, The Hormel Institute

THE ROLE OF MEDIUM-CHAIN TRIGLYCERIDES (MCT) IN PRESERVING RETICULOENDOTHELIAL SYSTEMS (RES) FUNCTION IN IMMUNOCOMPROMISED RATS

K. Hamawy, K. Yamazaki, V. Babayan, A. Valicente, G. Blackburn, Harvard Medical School, Boston, Massachusetts

MEDIUM-CHAIN TRIGLYCERIDES MAY BE THE OPTIMAL ENERGY SOURCE IN HEPATIC INSUFFICIENCY

J.J. Pomposelli, V.K. Babayan, G.L. Blackburn, Harvard Medical School, Boston, Massachusetts

INFLUENCE OF REDUCED FOOD INTAKE ON POLYSATURATED FATTY ACID METABOLISM IN ZINC-DEFICIENT RATS

S.B. Johnson, R.T. Holman, The Hormel Institute, Austin, Minnesota; T.R. Kramer, M. Briske-Anderson, U.S. Department of Agriculture, Grand Forks, North Dakota

PLASMA TRIGLYCERIDE SECRETION AND PLASMA AND LIVER LIPID CONCENTRATIONS: COMPARISONS OF RATS FED A FAT-FREE DIET OR DIETS CONTAINING 5% SATURATED FAT WITH RATS FED THESE DIETS PLUS 1% SAFFLOWER OIL

M.A. Williams, J. Tinoco, I. Hincenbergs, B. Thomas, University of California, Berkeley, California

NUTRITION IN RELATION TO GAS-LIQUID CHROMATOGRAPHIC PROFILES OF PLASMA TOTAL LIPIDS

A. Kuksis, J.J. Myher, K. Geher, W.C. Breckenridge, T. Feather, V. McGuire, J.A. Little, University of Toronto, Ontario, Canada

Session **Surfactants and Detergents III: Detergent Analysis**

Chairperson: Don Linder
Co-chairperson: Marv Allen

ANALYTICAL ¹⁴N-NMR SPECTROSCOPY OF QUATERNARY AMINES

T.M. Rothgeb, E.R. Jacobs, The Procter & Gamble Co., Cincinnati, Ohio

ANALYSIS OF QUATERNARY AMMONIUM COMPOUNDS

G. Szajer, L. Yodual, Arma Company, McCook, Illinois

THE ROLE OF INSTRUMENTATION IN DETERGENT ANALYSIS

J.P. Slobogin, The PQ Corporation, Lafayette Hill, Pennsylvania

MOLECULAR REARRANGEMENT OF FATTY ACID

Meetings

DIAMINES OF DIETHYLENETRIAMINE

W.M. Linfield, P.G. Bistline Jr., USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

Session **Protein Mineral Interaction: Functionality and Bioavailability**

Chairperson: Gur S. Ranhotre

RHEOLOGICAL CHARACTERIZATION OF PROTEIN CURDS FROM BLENDS OF MILK AND OILSEED PROTEINS

Y.R. Choi, E.W. Lusas, K.C. Rhee*, Texas A&M University, College Station, Texas

STUDIES OF THE INTERACTION OF ZINC ION WITH PHYTIC ACID

W.J. Evans

FUNCTIONALITY OF SOY PROTEIN IN MEAT INJECTION SYSTEMS

S. Young, Archer Daniels Midland Co., Chicago, Illinois

INTERACTION BETWEEN SODIUM SALTS OF CHLORIDE, PHOSPHATE, AND NITRITE AND TURKEY MUSCLE PROTEINS

K.J. Prusa, University of Missouri, Columbia, Missouri

BIOAVAILABILITY OF MINERALS FROM MILK-BASED AND SOY-BASED FORMULA DIETS

D.A. Cook, Mead Johnson Nutritional Division, Evansville, Indiana

PROTEIN SOURCES AND MINERAL UTILIZATION IN HUMANS

C.E. Bodwell, USDA Human Nutrition Research Center, Beltsville, Maryland

EFFECT OF PROTEIN ON IRON BIOAVAILABILITY

D.D. Miller, L.A. Berner, Cornell University, Ithaca, New York

EFFECT OF EGG PROTEIN ON IRON ABSORPTION

J. Miller, University of Georgia, Experiment, Georgia

Session **New Developments in Oilseed Products for Livestock Feeds**

Chairperson: Keith J. Smith, American Soybean Association, St. Louis, Missouri

Cochairperson: Lynn Jones, National Cottonseed Products Association, Memphis, Tennessee

OVERVIEW OF OILSEED PRODUCTS IN THE FEED INDUSTRY

A. Ater, Anderson Clayton & Co., Houston, Texas

PROTEIN UTILIZATION IN RUMINANT ANIMALS

F.N. Owens, A.L. Goetsch, D.C. Weakley, Oklahoma State University, Stillwater, Oklahoma

DIGESTIBILITY OF AMINO ACIDS IN OILSEED MEALS BY SWINE

D.A. Knabe, T.D. Tanksley Jr., Texas A&M University, College Station, Texas

USE OF COTTONSEED PRODUCTS IN POULTRY DIETS

B.L. Reid, University of Arizona, Tucson, Arizona

RESEARCH ON THE USE OF FULL-FAT SOYBEAN PRODUCTS

L.J. Hanson, Triple F Feeds, Des Moines, Iowa

FATS AND OILS—DYNAMIC, INTERESTING FEEDSTUFFS

H.D. Hathaway, Buckeye Cellulose Corp., Memphis, Tennessee

Session **Lipid Recovery**

Chairperson: Jeanne D. Joseph, National Marine Fisheries Service, Charleston, South Carolina

INFLUENCE OF EXTRACTION METHOD ON LIPID ANALYSIS

A.J. Sheppard, T.S. Rudolf, C.-S.J. Shen, Food and Drug Administration, Washington, D.C.

PROBLEMS IN EXTRACTION AND RECOVERY OF LIPIDS FROM MARINE ORGANISMS

J.D. Joseph, National Marine Fisheries Service, Charleston, South Carolina

VERSATILITY OF THE DRY COLUMN METHODS FOR LIPID ISOLATION

R.A. Maxwell, W.N. Marnier, USDA Eastern Regional Research Center, Philadelphia, Pennsylvania

CHLOROFORM-METHANOL (CM) AND HEXANE-ISOPROPANOL (HIP) FOR EXTRACTION OF LIPIDS FROM FINNISH DIETS

L. Hyvönen, U. Aulavuo, University of Helsinki, Helsinki, Finland; D. Homer, Valio Finnish Cooperative Dairies' Association; P. Koivistoinen, University of Helsinki

EVALUATION OF SEVERAL FACTORS ASSOCIATED WITH THE DETERMINATION OF THE OIL CONTENT OF HIGH OIL CONTENT OILSEEDS BY SOLVENT EXTRACTION

J.K. Daun, Agriculture Canada, Winnipeg, Manitoba, Canada

CHANGES IN LIPID CONTENT OF CRABMEAT AS A FUNCTION OF THE PICKING PROCESS

J. Krzynowek, K. Wiggin, National Marine Fisheries Services, Gloucester, Massachusetts

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AMERICAN OIL CHEMISTS' SOCIETY 75th ANNUAL MEETING