# Meetings

### AOCS National Meetings

April 29– May 3, 1972–New Orleans, La., Jung Hotel.
Sept. 16–19, 1973– Chicago, Ill., Pick Congress Hotel.
April 28–May 1, 1974– Mexico City, Mexico, Maria Isabel Sheraton Hotel, Aristos Downtowner.
Sept. 29–Oct. 2, 1974– Philadelphia, Pa., Sheraton Hotel.
April 27–30, 1975–Dallas, Tex., Statler Hilton

### AOCS Conference

June 17–21, 1973– Analysis of Lipids and Lipoproteins, Ramada Inn, Champaign, Ill. Contact: James Lyon, Executive Director, 508 S. Sixth, Champaign, Ill. 61820.

### Other Organizations

November 3–4, 1972– International Symposium on Perspectives of a Modern Food Law, The National Academy of Sciences, Budapest, Hungary.

Nov. 6, 1972– Canadian Society for Chemical Engineering's Symposium on Diffusion in Chemical Processes, Seaway Towers Hotel, Toronto, Ont., Canada. Contact: R. Hummel, Symposium Chairman, Dept. of Chemical Engineering, University of Toronto, Toronto Coppersmithing Co. Ltd., 220 Midwest Rd., Scarborough, Ont., Canada.

Nov. 9–10, 1972– Short Course on Pyrolysis Gas Chromatography: Techniques and Applications, Washington University. Contact: Washington University, Box 1048, St. Louis, Mo. 63130.

Nov. 28–30, 1972– Second International CAMAG Symposium on Thin Layer Chromatography and Electrophoresis, Park Sheraton Hotel, New York. Contact: Program Director, CAMAG, Inc., 2855 S. 163 St., New Berlin, Wis. 53151.

Nov. 30, 1972–National Institutes of Health Symposium on Recent Developments in Research Methods and Instrumentation, Jack Masur Auditorium, Building 10, National Institutes of Health, Bethesda, Md. Contact: Judy Summers, (301) 496-2315.

March 5–9, 1973– 24th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Cleveland Convention Center, Cleveland, Ohio. Contact: H.L. Retcofsky, Program Chairman, 1973 Pittsburgh Conference, U.S. Bureau of Mines, 4800 Forbes Ave., Pittsburgh, Pa. 15213.

Mar. 15–16, 1973– Third Technical Conference on Estuaries of the Pacific Northwest, Oregon State University. Contact: Larry S. Slotta, Director, Ocean Engineering Programs, Department of Civil Engineering, Oregon State University, Corvallis, Ore. 97331.

May 10–13, 1973– Symposium on Shampoos and Foam Bath Products, German Society for Cosmetology, Kurhotel, Bad Pyrmont, West Germany. Contact: G.A. Nowak, D-345 Holzminden, West Germany, Dr. Lehmann-Weg 12.

June 10–13, 1973–33rd Annual Meeting of the Institute of Food Technologists, Miami Beach Convention Hall, Miami Beach, Fla. Contact: E.H. Hoffman, IFT, Suite 2120, 221 N. La Salle, Chicago, Ill. 60601

June 20–27, 1973– Alchema '73 and the European Meeting of Chemical Engineering, Frankfurt/Main, Germany.

July 2–6, 1973– Second Congress of the Association Internationale de la Couleur, University of York, England.

September 10–13, 1973– International Microwave Power Institute Eighth Annual Microwave Power Symposium, Loughborough University of Technology. Contact: (Americas and Asia) R.A. Peterson, Raytheon Co., Microwave and Power Tube Division, Foundry Ave., Waltham, Mass. 02154; (Europe) R.B. Smith, School of Electrical and Electronic Engineering, University of Bradford, Bradford 7, Yorkshire, U.K.

Oct. 25–28, 1973– Third International Symposium on Atherosclerosis, Kongresshalle, West Berlin, Germany. Contact: Kongressgesellschaft für ärztliche Fortbildung e.V., 1 Berlin 41, Wrangelstrasse 11-12, Germany.

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# ABSTRACTS

R.A. REINERS, Editor. ABSTRACTORS: N.E. Bednarcyk, J.E. Covey, J.C. Harris, Yoshio Hirano, S. Kawamura, D.A. Leo, F.A. Kummerow, E.G. Perkins.

## • Fats and Oils

STRUCTURE AND SYNTHESIS OF MILK FAT. X. CHARACTERIZATION OF THE MAJOR HYDROXY COMPOUNDS IN MILK LIPIDS. H. Timmen and P.S. Dimick (Lipids Lab., Div. of Food Sci. and Industry, Penn. State Univ., Univ. Park, Pa. 16802). *J. Dairy Sci.* 55, 919–25 (1972). Lipids of fresh, raw bovine and caprine milks were extracted under mild conditions and immediately reacted with pyruvyl chloride 2,6-dinitrophenylhydrazone. The resulting derivatives were separated and isolated by column and thin-layer chromatography. Quantification was spectrophotometrically at 402 mμ. The 1,2-diglyceride and hydroxytriglyceride fatty acids were characterized as their methyl esters untilizing gas-liquid chromatography. Concentrations in weight per cent of the major classes of hydroxy compounds in the lipids of bovine herd milk were: 1,2-diglycerides 1.43 ± 0.11, hydroxytriglycerides 0.61 ± 0.05, and sterols 0.35 ± 0.03. Lipids of individual caprine milks yielded similar values. Bovine mammary tissue lipids were characterized by much higher levels of sterols and slightly higher levels of 1,2-diglycerides when compared with milk lipids from the same tissue. Fatty acid composition of the 1,2-diglycerides lacked short chain fatty acids, namely butyric and caproic acids. Hydroxytriglycerides were composed of the normal complement of fatty acids, however fewer short chain acids were evident when compared with triglycerides from the same milk.

TRITICALE AND WHEAT FLOUR STUDIES: COMPOSITIONS OF FATTY ACIDS, CARBONYLS AND HYDROCARBONS. K. Lorenz and J. Maga (Dept. of Food Sci. and Nutr., Colorado St. Univ., Fort Collins, Col. 80521). *J. Agr. Food Chem.* 20, 769–72 (1972). A comparison of the chemical composition of wheat and triticale flours demonstrated that their composition of fatty acids, carbonyl compounds and hydrocarbons is quite similar qualitatively but differed quantitatively. The Spring triticale flours contained higher percentages of stearic and linolenic acids and lower amounts of linoleic acid compared to corresponding wheat flours. The Spring triticale flours were lower in butanal, 2-butanone and heptanal, but higher in pentanal than the Spring wheat flours. A higher percentage of short-chain hydrocarbons was found in Spring triticale flours.

TECHNIC FOR RECOVERY OF VOLATILE COMPONENTS FROM LIPIDS FOR GAS CHROMATOGRAPHIC ANALYSIS. R.G. Arnold and H.M. Barnhart (Dept. of Food Sci. and Technol., Univ. of Nebraska, Lincoln, Neb. 68503). *J. Dairy Sci.* 55, 1069–72 (1972). A sampling system was developed which provides direct, rapid recovery of volatiles from lipids for subsequent gas-liquid chromatographic analysis. Lipid at 30% by weight is mixed with chromatographic solid support material. Lipid-coated support is packed into stainless steel tubing which is then connected to a flow-controlled nitrogen source and to the inlet of a packed gas-liquid chromatographic (GLC) column. Upon heating volatile components are eluted from the lipid and are collected in a dry ice cooled U-shaped section of the GLC column. The lipid, acting similar to stationary phase material, remains on the sample column. Recoveries with known compounds indicate a greater recovery of volatile components over a wider range than with previous purge methods for lipids.

PROPOSED TECHNIQUE FOR THE DETERMINATION OF BOTH MOISTURE AND FAT IN THE SAME SAMPLE OF MEAT OR MEAT PRODUCT. E.H. Cohen, and C.P. Kimmelman (Eastern Marketing and Nutritional Res. Div., ARS, USDA, Philadelphia, Pa. 19118). *J. Assn. Off. Anal. Chem.* 55, 578–80 (1972). The moisture content of ground meat, processed frankfurters and uncooked pork sausage mixtures was determined within a 15–30 minute time period and with a minimum of 95% recovery of moisture. Selective solvents, such as octane, nonane, toluene, xylene, ethylbenzene and cumene were evaluated. After removal of the moisture, the residue in the flask was sampled for the fat content. A 20 ml aliquot of the cooled total solution was removed, transferred to a tared vessel, and evaporated at its boiling point under a stream of nitrogen. The oil residue was weighed and calculated as percent fat. Recoveries of fat ranged from 95 to 100% for all solvents and meat products tested except for the uncooked pork sausage mixture. The latter product yielded 80–91% recovery of fat for all solvents. To obtain a 95–100% recovery from the uncooked pork sausage mixture required an additional 15–30 minutes digestion. The time required for fat determinations was from 15–30 minutes, depending upon the boiling point of the solvent.

CRITICAL ANGLE REFRACTOMETER MONITORS CONCENTRATION FOR IN-LINE PROCESS CONTROL. D.R. Carlson (Marketing V.P., The Electron Machine Corp., 1500 W. Ocala St., P.O. Box M, Umatilla, Fla. 32784). *Food Technol.* 26(5), 84–90 (1972). Refractive index can be used to measure concentration of various solutions and to indicate hydrogenation of edible oils. This article presents a basic discussion of the theory, benefits and applications of critical angle refractometers. Applications include the processing of sugar and tomato paste as well as hydrogenation of vegetable oils.

MEASURING THE SOLIDS CONTENT OF FOODS BY SOUND VELOCIMETRY. E.M. Zacharias Jr. and R.A. Parnell Jr. (NUSonics, Inc., 9 Keystone Pl., P.O. Box 248, Paramus, N.J. 07652). *Food Technol.* 26(4), 160–66 (1972). Sound velocimetry, the measurement of sound velocity in a medium, can be used to measure the solids content of food products. The technique is described, results are given for various fruit and vegetable juices, sauces, vegetable oils, wines and syrups, and an expression is given for determining measurement error.

## • Meetings. . .

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Oct. 24–25, 1973– Symposium on Environmental Chemistry: Know-How and Chemicals in 1973-78, Brussels, Belgium. Contact: i.b./c.c. Administration, Nieuwelaan 65, B-1820 Strombeek, Belgium.

October 29–November 2, 1973– Fourth International Conference on Atomic Spectroscopy, Toronto, Ontario, Canada.

December 10–12, 1973– Second Joint Conference on Sensing of Environmental Pollutants, Sheraton-Park Hotel, Washington, D.C. Contact: Philip N. Meade, Instrument Society of America, 400 Stanwix St., Pittsburgh, Pa. 15222. ■

# CALL FOR PAPERS

### AOCS 64TH ANNUAL SPRING MEETING

The Technical Program Committee has issued a call for papers to be presented at the AOCS Spring Meeting, April 29-May 3, 1973, in the Jung Hotel, New Orleans, La. Papers on lipids, fats and oils, and all related areas are welcome.

Submit three copies of a 100-300 word abstract with title, authors and speaker to Robert L. Ory and Harold P. Dupuy, Southern Regional Research Lab., P.O. Box 19687, New Orleans, La. 70179. The deadline for submitting papers is December 1, 1972.