

Lundberg Honored by Society of Chemical Industry

W. O. Lundberg (1944), Director of The Hormel Institute, and Past President of the AOCS (1963-64) was honored recently by the Oils and Fats Group of the Society of Chemical Industry, when he was chosen to deliver their first International Lecture, September 29, 1964.



Dr. Lundberg's lecture, "Some Recent Developments in Fat Nutrition," was presented at the Imperial College of Science and Technology, Prince Consort Road, London, England. Following is an abstract.

"About 35 years ago, it was discovered that certain fatty acids or related substances are required in the diet of animals, to maintain normal health. The nature of essential fatty acid activity, as presently understood, was reviewed, and recent observations concerning metabolic interconversions of polyunsaturated fatty acids in animals were discussed.

"A second area of fat nutrition, and a very confused one that currently demands widespread interest, is the role of dietary fats in atherosclerosis and heart disease. Some findings in recent animal experiments were presented, which suggest that the importance of differences in the effects of saturated and unsaturated dietary fats may have been over-emphasized."

Dr. Lundberg had a chance to renew his friendship with Dr. Harold Jasperson (1946), Hon. Secretary of the Oils and Fats Group, at the Fall Meeting in Chicago.

Chicago Fall Meeting Prize Winners

Following is a list of donors, prizes and winners from the Ladies' Luncheons at the 38th Fall Meeting in Chicago, Oct. 11-14, 1964.

American Mineral Spirits Co., Stainless Steel Farberware Coffee Maker, Mrs. C. D. Evans.
 American Mineral Spirits Co., Fleetwood Steak Knives, Mrs. S. J. Rini.
 The V. D. Anderson Co., Schick "Crown Jewel" Shaver, Mrs. Norma McEwan.
 Archer Daniels Midland Co., GE Six Transistor Radio, Mrs. L. E. Conway.
 Bennett Clark Co., Inc., Series "E" Bond, Mrs. S. T. Bauer.
 Blaw-Knox Co., GE AM-FM Portable Radio, Mrs. W. E. Crabtree.
 Croil-Reynolds Co., Inc., BVI Can Opener & Sharpener, Mrs. A. Rummelsburg.
 The De Laval Separator Co., Farberware Coffee Maker, Mrs. R. R. King.
 Delta Air Lines, Inc., Champagne in Flight Bag, Mrs. A. H. Preston.
 Distillation Products Ind., Instamatic 100 Camera Kit, Mrs. Sandra French.
 Durkee Famous Foods, Spice Rack with Spices, Mrs. R. D. Wood.
 Durkee Famous Foods, Spice Rack with Spices, Mrs. Giles Colbert.
 French Oil Mill Machinery Co., Sunbeam Fry Pan, Mrs. Norma McEwan.
 Griffith Laboratories, Inc., Spice Mill Set, Mrs. H. G. Solomon.
 Griffith Laboratories, Inc., Spice Mill Set, Mrs. Kenneth Holt.
 Griffith Laboratories, Inc., Spice Mill Set, Mrs. Dorothy Tindall.
 A. Gross & Co., 1 dz. 15" Candles, Mrs. S. N. Milazzo.
 A. Gross & Co., 1 dz. 15" Candles, Mrs. Wm. Lucus.
 A. Gross & Co., 1 dz. 15" Candles, Mrs. R. Brian.
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 Humble Oil & Refining Co., Silver Cocktail Pitcher and Stirrer, Mrs. Elizabeth Baggs.
 Owens-Illinois Glass Co., 8 Goblets, Mrs. S. J. Rini.
 Owens-Illinois Glass Co., 8 Old Fashioned Glasses, Mrs. D. H. Wheeler.
 Owens-Illinois Glass Co., 6 Pilsner Glasses, Mrs. Wm. Walther.
 Owens-Illinois Glass Co., 8 Iced Tea Glasses, Mrs. Dorothy Proteau.
 Owens-Illinois Glass Co., 1 dz. Cocktail Glasses, Mrs. J. D. Nadenicek.
 Chas. Pfizer & Co., Inc., GE Clock Radio, Mrs. Mila Visch.
 Pilot Chemical Co., Westinghouse Hair Dryer, Mrs. Eugene Sallee.
 E. H. Sargent & Co., GE Portable Mixer, Mrs. O. Privett.
 Skelly Oil Co., GE Clock Radio, Mrs. W. H. Walker.
 Sparkler Manufacturing Co., BVI Can Opener and Sharpener, Mrs. W. A. Singleton.
 Stepan Chemical Co., Sunbeam Fry Pan, Mrs. H. G. Solomon.
 Stepan Chemical Co., Shelton Ware Food Warmer, Mrs. A. Rummelsburg.
 Union Carbide Corp., Eveready Flashlight, Mrs. W. E. Crabtree.
 UOP Chemical Co., 3 pc. Silver Service with Tray, Mrs. C. B. Rose.
 Wurster & Sanger, Inc., Ronson Hair Dryer, Mrs. A. Bailey.



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(Continued from page 50)

from the group consisting of a glyceryl triester of a saturated fatty acid having 6-12 carbon atoms, a glyceryl triester of a mixture of saturated fatty acids with 6-12 carbons and mixtures of the glyceryl triesters.

• **Detergents**

QUALITATIVE AND QUANTITATIVE INFRARED SPECTROSCOPIC EXPERIMENTS ON ETHYLENE OXIDE ADDUCTS. Chr. Glassmann and K. Macnechen (Phys. Opt. Zehimmer & Schwarz, E. Leitz, Wetzlar). *Fette Seifen Anstrichmittel* 65, 741-747 (1963). Infrared spectroscopic measurements on ethylene oxide adducts have produced a method for the determination of the amount of hydroxyethylation of various materials. Accurate results can be obtained from fat-alcohol polyglycoethers and alkylphenolpolyglycoethers. Representative infrared spectra are given.

DETERMINATION OF DIMETHYLFORMAMIDE IN SUCROSE ESTERS BY INFRARED SPECTROPHOTOMETRY. J. Zajíc and M. Bares (Inst. Chem. Tech., Prague). *J. Inst. Chem. Tech. Prague* 7-2, 215-22 (1963). Very small amounts of dimethylformamide in sucrose esters can be analyzed for by IR in the region of 1650-1690 cm^{-1} , which is the region of amide group vibration. *n*-Butanol is somewhat more suitable as a solvent than chloroform since it gives a more narrow absorption band for the carbonyl group. Sensitivity of the method is about 0.01% dimethylformamide with *n*-butanol and 0.1% with chloroform, with an analytical error of no more than $\pm 10\%$.

PREPARATION OF MONO- AND DIESTERS OF SUCROSE WITH OLEIC AND LINOLEIC ACIDS. J. Zajíc and B. Auerswald (Inst. Chem. Tech., Prague). *J. Inst. Chem. Tech. Prague* 7-2, 205-13 (1963). The course of the esterification reaction between sucrose and methyl esters of oleic and linoleic acids was investigated. The

reaction was carried out in dimethylformamide, with potassium carbonate as catalyst, at 90C and under vacuum. The end product composition could be controlled by a suitable choice of reactants. The course of the reaction can be followed by means of specific rotation, but only when monoesters are being prepared. The prepared sucrose esters had a glassy, resin-like appearance and yellowish color.

THE EFFECT OF PARTIALLY ACETYLATED MONO- AND DIGLYCERIDES ON THE CONSISTENCY OF COSMETIC CREAMS. J. Pokorný, V. Pokorná and I. Tománková (Inst. Chem. Tech., Prague). *J. Inst. Chem. Tech. Prague* 7-1, 167-78 (1963). Partially acetylated mono- and diglycerides, as compared to completely acetylated derivatives, produce cosmetic creams with better thermal resistance, better emulsion stability and better spreadability. Consistency of the creams was judged by the diameter of stripes placed under constant load between two glass plates and was found to increase appreciably during the first 17 days after making.

THE PREPARATION OF MONO- AND DIESTERS OF SUCROSE WITH LAURIC AND STEARIC ACID. J. Zajíc and M. Bares (Inst. Chem. Tech., Prague). *J. Inst. Chem. Tech. Prague* 7-1, 151-66 (1963). The course of the esterification reaction between sucrose and methyl esters of lauric and stearic acid was studied. Potassium carbonate was used as the catalyst and dimethylformamide as the solvent. Specific rotation was found to be unsuitable as a means of reaction control. It was more convenient to trace the reaction by calculating the molar ratio of the reacting components, after determination of the catalyst and soap contents. Refractive index was found acceptable for a rapid control of the reaction course, reaching a constant value at equilibrium. Measurement of the dielectric constant during the reaction also failed to give reproducible results.

SOAP COMPOSITIONS. W. A. Kelly (Lever Brothers Co.). *U.S. 3,150,097*. A soap bar consists of a water-soluble soap which normally forms water-insoluble soap curd in hard water selected from the group consisting of sodium and potassium salts of fatty acids of about 8-18 carbon atoms and from 10-30% of an alkaline earth metal salt of a mixture of sulfonated monophenyl-substituted alkanes having an alkane structure corresponding to a mixture of acrylic polypropylenes. The acid form of the sulfonated mixture has an average molecular weight of between 335 and 370, the alkaline earth metal is selected from the group consisting of calcium and magnesium and the proportions are based on the combined weight of the soap and the sulfonate.

LIQUID DETERGENT. J. H. Wilson (Lever Brothers Co.). *U.S. 3,150,098*. A uniform, light duty, liquid detergent composition consists of an aqueous solution of from 40-50% by weight total solids content. The solids content consists of 15-63% by weight of an alkylbenzene sulfonate having an alkyl group averaging from 12-15 carbon atoms, 13-53% of an alkylphenoxypolyoxyethylene sulfate having an alkyl group of 9-12 carbons and containing from 4-6 oxyethylene groups and 17-45% of a short chain alkylaryl sulfonate. The relative amounts of the solids components are adjusted to give the composition uniformity and a viscosity of 150-625 centipoises at 80F. The cationic portions of the three components are selected from the group consisting of Na, K and NH₄.

SOLUBILIZER FOR SYNTHETIC DETERGENT. L. R. Schiltz and R. H. Rogers (Swift and Co.). *U.S. 3,151,084*. A surface active detergent composition, characterized by exhibiting a high degree of water solubility at effective concentration levels contains: a detergent consisting essentially of an alkyl aryl sulfonate and an inorganic detergency builder salt and at least 0.25% by weight of a mixture consisting of 50-95% by weight of ethylene diamine tetraacetic acid tetrasodium and from 5-50% of the sodium salt of N,N-di(2-hydroxyethyl)glycine.

PROCESS OF PREPARING FATTY ACID ESTERS OF HYDROXYALKANE SULFONIC ACIDS. E. Koczorowski, L. Habicht and A. Kluge. *U.S. 3,151,136*. The process of preparing a fatty acid ester of a fatty acid ester of a hydroxyalkane sulfonic acid compound in high yield comprises heating fatty acid an a hydroxyalkane sulfonic acid which is substantially free from its salts at a temperature from 100-150C for a period of time up to about 1 and 1/2 hours and simultaneously removing the water of reaction.

RESINOUS COMPOSITIONS AS DETERGENT ADDITIVES. G. P. Touey and H. E. Davis (Eastman Kodak Co.). *U.S. 3,152,993*. A composition soluble in water to form a washing solution which is effective not only to remove soil from textile materials but also to minimize redeposition of removed soil comprises the mixture of an organic anionic detergent and a water soluble sulfonate salt of a condensation product of formaldehyde with either urea or melamine.

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