

mole in aging cells of *L. lipoferus*, and previous data, suggest that aging in this yeast is accompanied by a decrease in membrane fluidity.

ISOLATION OF 1,3-DISTEAROYL-GLYCERO-2-PHOSPHOCHOLINE (β -LECITHIN) FROM COMMERCIAL 1,2-DISTEAROYL-*SN*-GLYCERO-3-PHOSPHOCHOLINE. M.M. Ponpipom and R.L. Bugianesi (Merck Sharp & Dohme Res. Labs., Rahway, NJ 07065) *J. Lipid Res.* 21(1), 136-9 (1980). Different batches of 1,2-distearoyl-*sn*-glycero-3-phosphocholine (DSPC) had varying amounts of contaminants which appeared to affect systematic biological studies. This contaminant was separated by silica gel column chromatography followed by high performance liquid chromatography and identified as 1,3-distearoyl-glycero-2-phosphocholine (β -lecithin).

DETERMINATION OF DOUBLE BOND POSITION IN TRI- TO HEXAENOIC FATTY ACIDS BY MASS SPECTROMETRY. B. Schmitz and H. Egge (Physiologisch Chemisches Institut der Universität Bonn, Nussallee 11, D-5300 Bonn F.R.G.) *Chem. Phys. Lipids* 25(3), 287-98 (1979). Methyl esters of polyenoic fatty acids (FAE) with up to six double bonds can be transformed to polyhydroxy derivatives by treatment with OsO_4 . Under low energy electron impact the trimethylsilyloxy (O-TMS) derivatives of these polyenoic fatty acids exhibit mass spectrometric fragmentation pat-

terns that are straightforward due to the almost exclusive cleavage of the C-C bonds in between vicinal O-TMS groups. Thus it is possible to localise original double bond positions and also to predict fragmentation patterns of hitherto unknown fatty acid species. The method is applicable to polyenoic compounds with isolated as well as conjugated double bonds.

SYNTHETIC STUDIES OF PHOSPHOINOSITIDES. A.E. Stepanov and V.I. Shvets (Lomonosov Inst. of Fine Chem. Tech., Moscow U.S.S.R.) *Chem. Phys. Lipids* 25(3), 247-63 (1979). Intensive study of native lipids, in particular of polar lipids, is justified by their importance for molecular organisation and functioning of biological membranes. One of the major groups of native phospholipids is the phosphoinositides which are actively involved in brain cells, nervous tissue, liver and other vital organs of man and higher animals. A recent review by Michell provides exhaustive data on chemistry and metabolism of this interesting class of phospholipids. One approach to the study of the structure and properties of these compounds is provided by the chemical synthesis of molecular types of phospholipids with native stereochemical configuration. Advances in the synthesis of phosphoinositides open new vistas of synthetic individual phosphoinositides with practically any structure and molecular type.

A METHOD FOR THE QUANTITATIVE ESTIMATION OF CHOLESTEROL α -OXIDE IN EGGS. L.S. Tsai, K. Ijichi, C.A. Hudson and J.J. Meehan (Western Regional Res. Center, SEA, USDA, Berkeley, CA 94710) *Lipids* 15(2), 124-8 (1980). A method for the quantitation of cholesterol α -oxide in egg and egg products is described. Total lipids extracted from dry egg samples were fractionated on a silicic acid column to concentrate cholesterol oxides which were then quantitatively determined by gas liquid chromatography (GLC). Those samples which showed cholesterol oxides by GLC were further analyzed by high pressure liquid chromatography (HPLC) for the ratio of cholesterol α -oxide and cholesterol β -oxide. Cholesterol α -oxide content was calculated from the combined results of GLC and HPLC.

SYNTHESIS OF [11- 2H_2], [8- 2H_2], [7- 2H_2], [6- 2H_2], [5- 2H_2], [4- 2H_2] and [3- 2H_2] *cis*-9-OCTADECENOATES. A.P. Tulloch (National Res. Council of Canada, Prairie Regional Lab., Saskatoon, Saskatchewan S7N 0W9 Canada) *Chem. Phys. Lipids* 25(3), 225-35 (1979). Deuterated oleates have been synthesized by semihydrogenation of acetylenic intermediates. [11- 2H_2] Oleate was prepared by two-carbon chain extension of the C_{16} alcohol obtained from [1- 2H_2] octyl bromide and 7-octyn-1-ol. [8- 2H_2] and [7- 2H_2] oleates were both prepared from dimethyl suberate, tetradeuterio intermediate C_{18} alcohols were synthesized from [1,8- 2H_4] and [2,7- 2H_4] octane diols by monobromination, conversion to deuterated 9-decyn-1-ols and reaction with octyl bromide. Oxidation gave [8- 2H_2]-9-octadecynoate and [2,7- 2H_2]-9-octadecynoate, after semihydrogenation of the latter, deuterons at C-2 were removed by

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exchange with aqueous alkali. [6-²H₂] and [5-²H₂] oleates were obtained from methyl 5-tetradecynoate, semihydrogenation, deuterium exchange at C-2 and two malonate extensions gave [6-²H₂]-oleate; reduction with lithium aluminum deuteride, two malonate extensions and semihydrogenation gave the [5-²H₂] ester. [4-²H₂] and [3-²H₂] oleates were both obtained from methyl 7-cis-hexadecenoate, exchange of the α protons and chain extension gave the [4-²H₂] ester and reduction with lithium aluminum deuteride and chain extension gave the [3-²H₂] ester.

OXIDATIVE RANCIDITY IN STORED GROUND TURKEY AND BEEF. M.T. Younathan, Z.M. Marjan and F.B. Arshad (School of Home Economics, Louisiana State Univ., Baton Rouge, LA 70803 and Universiti Kebangsaan Malaysia, Peti Surat 2418, Kuala Lumpur) *J. Food Sci.* 45(2), 274-5 (1980). Oxidative rancidity in stored cooked ground turkey and beef was determined by the thiobarbituric (TBA) test and sensory evaluations. There was an increase in rancidity with storage for all samples; however, beef treated with onion juice or textured vegetable protein showed a slower rate of deterioration. Rancidity in turkey was effectively controlled by hot-water extracts of eggplant tissue, peels of yellow onions, potatoes and sweet potatoes, although initial values were high. There were high positive correlations between TBA values and panel scores for cooked ground beef. Panel members were less sensitive to the rancid odor in turkey and failed to give low sensory ratings even though TBA numbers were high.

METHOD OF RECOVERING TALL OIL FROM ACIDULATION OF RAW TALL OIL SOAP. BASF Wyandotte Corp. *U.S.* 4,154,725. The acidulation of tall oil soap with sulphuric acid is carried out in presence of a terpolymer of allyl alcohol. (World Surface Coatings Abs. No. 452)

DISSOCIATION CONSTANTS OF LONG CHAIN FATTY ACIDS IN METHANOL/WATER AND ETHANOL/WATER MIXTURES. M.A. Rahman, A.K. Ghosh and R.N. Base. *J. Chem. Tech. Biotech.* 29(3), 158-62. (1979). The pKa values of lauric acid, myristic acid, palmitic acid and stearic acid in methanol/water and ethanol/water mixtures of different compositions at 313 K have been determined. The pKa values of the fatty acids have been found to increase with the alcohol content of the solvent. It has also been found that, in general, the pKa values in the ethanolic solvent are greater than those in the methanolic solvent. In a given solvent mixture the observed pKa value decreases in order of stearic acid, palmitic acid, myristic acid, lauric acid. (World Surface Coatings Abs. No. 449)

LAURIC ACID: REVIEW OF PROPERTIES AND USES. E.S. Lower. *Polym. Paint Col. J.* 169, No 4006, 817-20 (1979). Chemical and physical properties are tabulated; uses include pigment, resin and paint manufacture, corrosion prevention, lubrication and surfactant production. (World Surface Coatings Abs. No. 452)

A CENTURY OF DRYING OILS. N.F. Lythgoe. *Polym. Paint. Col. J.* 169, 507-12 (1979). Extracting and refining processes of the principal drying oils used by the paint industry, their availability and present trends in formulations are reviewed. The traditional linseed, soyabean and tung oils are being supplemented by oiticica oil, castor oil and such semi-drying oils as sesame seed, sunflower and tobacco seed oil. (World Surface Coatings Abs. No. 448)

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