• *Abstracts . . .*

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LIQUID-LIQUID SYSTEMS AND ITS EXPERIMENTAL VERIFICATION FOR STEROIDS BY STATIC AND CHROMATOGRAPHIC MEASUREMENTS. J.F.K. Huber, C.A.M. Meijers and J.A.R.J. Hulsman (Lab. Anal. Chem., Univ. Amsterdam, Netherlands). *Anal. Chem.* 44, 111–6 (1972). A new method for the prediction of partition coefficients is given in which the partition coefficients are described as a function of n parameters characterizing the solute and the liquid-liquid system. A reference set of parameters had been determined by the correlation of a number of experimental partition coefficient data according to the least square method by a computer procedure. For the measurement of partition coefficients, a dynamic method had been elaborated in which standard data obtained by static measurements are used. The correlation method had been tested for 28 steroids in 6 ternary liquid-liquid systems composed by water, ethanol and 2,2,4-trimethyl pentane. For $n = 3$, a precision of about 4% was obtained.

VIBRATIONAL SPECTRA OF LIQUID CRYSTALS. III. RAMAN SPECTRA OF CRYSTAL, CHOLESTERIC AND ISOTROPIC CHOLESTEROL ESTERS, 2800–3100-cm^{-1} REGION. B.J. Bulkin and K. Krishnan (Dept. of Chem., Hunter College of the City Univ. of New York, N.Y., N.Y. 10021). *J. Am. Chem. Soc.* 93, 5998–6004 (1971). The Raman spectra of a series of cholesteric liquid crystals have been recorded in an attempt to elucidate the nature of intermolecular interactions in these phases. While most Raman bands are unaffected by the crystal-liquid crystal and liquid crystal-isotropic liquid phase transitions, certain C–H stretching bands change both frequency and intensity. These bands are assigned using arguments based on model steroids. It is shown that the results are indicative of regions of local order in the cholesteric phase which are similar to those in the crystal.

SEPARATION OF GEOMETRIC ISOMERS OF UNSATURATED FATTY ACIDS BY CIRCULATION GAS CHROMATOGRAPHY. V.P. Chizhkov et al. *Izv. Akad. Nauk, Ser. Khim.* 1971, No. 6, 1154–7. A method of recirculation gas chromatography was used for the separation of geometric isomers of the methyl esters of 9-octadecenoic and 9,12-octadecadienoic acids. The effectiveness of the separation is comparable with that of the capillary column. (World Surface Coatings Abs. No. 354)

SOLUBILITY OF STEARIC ACID IN SOME HALOFLUOROCARBONS, CHLOROCARBONS, ETHANOL AND THEIR AZEOTROPES. D.A. Brandreth and R.E. Johnson. *J. Chem. Eng. Data* 16, No. 3, 325–7 (1971). The solubility of stearic acid in each of the solvents CCl_2FCClF_2, CCl_3CF_3, CH_3CCl_3, CCl_2FCCl_2F, CF_2Br-CF_2Br, CCl_4, CH_2Cl_2, CH_3CH_2OH, and the azeotropes of CCl_2FCClF_2 with CH_3CH_2OH, CH_2Cl_2, $CHCl_3$, $(CH_3)_2CO$, and $(CH_3)_2CHOH$ was determined as a function of temp. in the range of 20–50C by the phase disappearance method. (World Surface Coatings Abs. No. 354)

INDUSTRIAL OILS, FATS AND WAXES. S.D. Manton, *Soap, Perfumery Cosmet.* 44(11), 705–14 (1971). Oils, fats and waxes as used in the cosmetic, detergent and allied industries are reviewed. Individual oils, fats or waxes are reviewed by source, characteristics, physical and chemical data and application. Included is an extensive table of the fatty acid composition of animal fats and oils and another covering the principal vegetable fats and oils.

PROCESS FOR MAKING AERATED SHORTENINGS. E.J. Reid and P.W. Morgan, Jr. (Hunt-Wesson Foods). *U.S. 3,637,402.* A shortening containing 20–26% gas by volume is processed in conventional chilling and agitating units. The liquid fat and gas mixture is initially pressurized to a relatively high pressure to place the gas in solution. The pressure is then reduced to about half to release part of the gas in solution and to disperse gas prior to chilling and agitating. Processing can thus be carried out at lower pressure.

• Fatty Acid Derivatives

X-RAY STRUCTURE OF RACEMIC GLYCEROL 1,2-(DI-11-BROMOUNDECANOATE)-3-(-P-TOLUENESULFONATE). P.H. Watts, Jr., W.A. Pangborn and A. Hybl (Dept. of Biophys., Univ. of Maryland School of Med., Baltimore, Md. 21201). *Science* 175, 60–61 (1972). The single crystal x-ray structure of racemic glycerol 1,2-(di-11-bromoundecanoate)-3-p-toluenesulfonate, a sulfolipid analogous to the membrane phospholipids, reveals a folded conformation.

POLYURETHANES PREPARED FROM GLYCERIDE REACTION PRODUCTS. P. Wolff and H.-O. Larsen. *U.S. 3,637,539.* The polyurethanes are the reaction product of a polyisocyanate and a polyol component, of which a substantial part is a reaction mixture of hydrocarbon fatty acid glyceride with dialkanolamine. At least half of the fatty acid has been converted into alkanolamide.

POLYURETHANES FROM FATTY ACIDS. P. Wolff and H.-O. Larsen. *U.S. 3,637,540.* The process is similar to the one disclosed in *U.S. 3,637,539* except that a free fatty acid or lower alkyl ester of the fatty acid is used in place of the glyceride. The polyol component contains at least 25% of monomeric fatty acid radicals.

PROCESS FOR THE MANUFACTURE OF UNSATURATED ESTERS OF CARBOXYLIC ACIDS. K. Sennewald, W. Vogt, H. Erpenbach, H. Glaser and H. Dyrschka (Knapsack Aktiengesellschaft). *U.S. 3,637,819.* The esters are produced by reaction of an olefinic compound and an aliphatic or aromatic carboxylic acid, each containing 2–20 carbon atoms, with molecular oxygen or air in the gas phase at elevated temperature. The reaction is carried out in contact with a carrier catalyst containing palladium acetate, alkali metal acetate, and one or more vanadium compounds as its active constituents. The dry, powdery carrier catalyst is irradiated with ultraviolet or visible light prior to use.

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Northern California Section Announces May Meeting

The Northern California Section of the AOCS will hold a dinner meeting at H'S LORDSHIP RESTAURANT, Berkeley Marina, Berkeley, California, May 19, 1972. "Quality Control and Quality Assurance" will be the topic of the evening. Alan McGregor, Quality Control Manager of Brookside Division Safeway Stores, Incorporated, will head a discussion group.