CHAIN MONOETHYLENE FATTY ACIDS IN HYDROGENATED OILS. R.G. Ackman, S.N. Hooper and J. Hingley (Fisheries Res. Board of Canada, Halifax Lab., Halifax, Nova Scotia, Canada). *J. Chromat. Sci.* 10, 430-6 (1972). Methyl esters of fatty acids from a commercial margarine based primarily on a partially hydrogenated marine oil showed four distinct bands of monoethylenic unsaturation when the methyl esters were examined by TLC on silica gel impregnated with silver nitrate. The compositions of the four bands were compared by GLC on open-tubular columns coated with Apiezon-L. It was shown that each band included part of each of the four major chain lengths of marine oils (C_{16}, C_{18}, C_{20}, C_{22}), with the longer chain lengths more concentrated in the most mobile band. Fractionation within each band was based on the *trans* isomers being more mobile than the *cis* isomers and to a further subfractionation of both *cis* and *trans* materials because of the greater mobility of isomers with unsaturation closest to the terminal methyl group of the chain.

AUTOXIDATION OF OILS AT HIGH TEMPERATURES. XV. CHANGES IN THE STRUCTURE OF THE PEROXIDES DURING THE AUTOXIDATION. J. Pokorny et al. *Sb. Vys. Sk. Chem.-Technol. Praze, Potraviny* **E** 30, 79-84 (1971). The ethyl esters of sunflower oil were oxidized at 50C. The peroxides formed were separated by paper chromatography using paraffin oil as the stationary phase and aqueous pyridine as the mobile phase, which resulted in two major peroxidic fractions and three minor peroxidic fractions. The minor fractions, with R_f values of 0.00, and 0.05–0.10 are little affected by the degree of oxidation, while the minor fraction of R_f value 0.90–0.93 appears only during the later stages of oxidation. The major fraction with R_f value 0.28–0.39 constitutes about 95% of the peroxides. The other major fraction had an R_f value of 0.62–0.77. (Rev. Franc. Corps Gras)

RAPESEED. XII. FORMATION OF ALKALI-SOLUBLE PIGMENTS DURING HEATING OF RAPESEED PRESSCAKE. J. Pokorny. *Sb. Vys. Sk. Chem.-Technol. Praze, Potraviny* **E** 30, 71–7 (1971). Rapeseed presscake is frequently heated for purposes of eliminating isothiocyanates and 2-vinyl-oxazolidinethione. This heating causes an intense browning because rapeseed presscake contains a relative high concentration of reducing sugars. Formation of the products of nonenzymatic browning can be determined by measuring the color at 430 and 500 nm of extracts obtained by boiling the meal with a 10% solution of NaOH. Since the intensity of the color is a linear function of the temperature and the duration of the heating, the extinction values of the extracts permit evaluating the intensity of the color. (Rev. Franc. Corps Gras)

DETERMINATION OF THE BENZIDINE VALUE IN OXIDIZED FATS AND OILS. J. Pojorny *et al. Sb. Vys. Sk. Chem.-Technol. Praze, Potraviny* **E** 30, 57–69 (1971). The photometric determination of the degree of rancidity of fats and oils following reaction with benzidine is simple and reproducible. Analytic error is smallest in chloroform-methanol, but the reaction is too slow. It can be accelerated by addition of organic acids; among the preferred ones are acetic, monochloroacetic and trichloroacetic. The best reaction medium is a mixture of 20% chloroform and 80% ethanol containing 0.2% trichloroacetic acid and 0.06–0.08% benzidine. The sample should be chosen in such a manner that the extinction at 430 nm in 13 mm cuvettes, following the optimum reaction time of 240 min at 60C, is between 0.1 and 0.3. Peroxides should be eliminated before the reaction is run. (Rev. Franc. Corps Gras)

EFFECT OF THE PROPERTIES OF THE SOLID PHASE IN THE LIQUID OIL ON THE QUALITY OF WHITE BREAD. L.P. Tarasova et al. *Izv. Vysshikh Uchebn. Zavedenii, Pishchevaya Tekhnol.* 1972 (2), 56–9. The rheological properties of the dough and the quality of the bread are favorably influenced by fatty mixtures, added to the dough at levels of 0.25–5% of the flour and consisting of 90–95% of sunflower oil and 5–10% of highly hydrogenated (melting point 62C; hardness 1000 g/cm) cottonseed oil. (Rev. Franc. Corps Gras)

LIBERATION OF BOUND LIPIDS IN SUNFLOWER SEEDS AS A FUNCTION OF THE EXTRACTION CONDITIONS. V.N. Brik et al. *Mashlozhir. Prom.* 1972(6), 10–12. Liberation of bound lipids during solvent extraction of sunflower seed flakes increases with the increase of the ratio between the flakes and the solvent. When the flakes are extracted with recycled miscella, as is done industrially, the quantity of bound lipids which are freed is greater than that liberated during extraction by infusion (as found in a Soxhlet apparatus). (Rev. Franc. Corps Gras)

INFLUENCE OF THE MAJOR FACTORS IN THE EXTRACTION-DISTILLATION SYSTEM ON THE REFINABILITY OF SUNFLOWER SEED OIL. V.V. Beloborodov et al. *Izv. Vysshikh Uchebn. Zavedenii, Pishchevaya Tekhnol.* 1972(2), 76–9. With increase in the extent of extraction, the yield of refined oil decreases more or less as a function of the method of refining. After distillation, the difference in the refinability of oils of different degrees of extraction decreases relative to the difference in yield after proper refining. The formula for calculating the refining loss should take into account not only the free fatty acid content and phosphatide content but also the amount of secondary oxidation products. (Rev. Franc. Corps Gras)

EFFECT OF HYDRATION AND THE METHOD OF NEUTRALIZATION ON THE REDUCTION OF COMPLEX RESIDUE IN SUNFLOWER SEED OIL. K.K. Ol'mezov et al. *Mashlozhir. Prom.* 1972(7), 38–9. The discontinuous hydration of the oil results in a reduction of the complex residue to 15.7–27.1% of the quantity initially in the oil. During alkaline refining, the amount is lowered to 21.4–29.1%. The neutralization processes for sunflower oil adopted by industry results in a reduction in the amount of complex residue varying from 26.2 to 53.1%, depending on the temperature conditions and other conditions in the process. (Rev. Franc. Corps Gras)

PROCESS FOR PREPARING STEROLS FROM TALL OIL PITCH. D.V. Julian (Procter & Gamble). *U.S. 3,691,211.* The process involves extraction in a water-alcohol-hydrocarbon mixture followed by saponification and subsequent recrystallization and leaching.

AOCS Northeast Section Student Award Information

The officers and directors of the AOCS Northeast Section voted in September 1972 to allocate $200 for the Student Award in the 1972-73 period.

All senior students who are engaged in the advanced studies of oils, fatty acids, lipids, or their technology, and have published a copy of their work in the form of a thesis or technical publication are eligible for the award. The students must be enrolled at universities in the states of New England, New York, New Jersey, Maryland, Delaware, District of Columbia or Pennsylvania. The relatives of AOCS members will be given preference in consideration for the award.

How to Apply

A student applying for the award must supply letters of support from two faculty members of concerned colleges, one letter from a member of the AOCS Northeast Section and a copy of the publication for review by the Student Award Committee. The application must be sent to:

Hans Kaunitz, Chairman of Student Award Committee
Columbia University
630 West 168th Street
New York, N.Y. 10032

A copy of the application should be sent to:

S. Dominik, President, AOCS Northeast Section
Baker Castor Oil Co.
40 Avenue A
Bayonne, N.J. 07002
Telephone: (201) 436-8800

Kaunitz and his committee will select the best qualified recipient of the Award.

Nominations should be submitted prior to March 1, 1973. ■