(1979). Minced carp tissue was cooked by baking and deep-fat frying and stored at -18 C for periods up to 8 wk. Phospholipid (PL) levels decreased whereas free fatty acids (FFA) increased during frozen storage of all samples. Samples treated with antioxidants gave significantly ($P < 0.05$) higher values for FFA compared to the controls. Thiobarbituric acid (TBA) values were higher in the cooked samples compared to the raw samples. Samples without antioxidants had considerably higher TBA values than those containing antioxidants. The carbonyl content of the samples fluctuated during storage. There was no significant change in the composition of the fatty acids during storage.

A NEW SERIES OF LONG-CHAIN DICARBOXYLIC ACIDS WITH VICINAL DIMETHYL BRANCHING FOUND AS MAJOR COMPONENTS OF THE LIPIDS OF *BUTYRIVIBRIO* SPP. R.A. Klein, G.P. Hazelwood, P. Kemp and R.M.C. Dawson (M.R.C. Biochem. Parasitology Unit, Molteno Inst., Univ. of Cambridge, Cambridge CB2 3EE, U.K.) *Biochem. J. 183*(3), 691-700 (1979). Some members of the genus *Butyrivibrio*, including a general fatty acid auxotroph (strain S2), contain as a major part of their complex lipids a high-molecular-weight component that is probably formed by the union of two fatty acid chains [Hazelwood & Dawson (1979) *J. Gen. Microbiol.* 112, 15-27]. Proton and ^{13}C n.m.r. and i.r. and mass spectroscopy were used to examine a homologous series of these moieties and, in addition, the hydrocarbon derivative of one homologue and several synthetic compounds. The results indicate that the high-molecular-weight components are a series of long-chain dicarboxylic acids containing vicinal dimethyl branching, located near the centre of the chain.

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CONTENT AND STABILITY OF α-TOCOPHEROL IN FRESH AND DEHYDRATED PEPPER FRUITS (*CAPSICUM ANNUUM* L.). J. Kanner, S. Harel and H. Mendel (Div. of Food Technology, Institute for Technology & Storage of Agricultural Products, Agricultural Research Organization, Volcani Center, Bet Dagan 50-100, Israel) *J. Agric. Food Chem.* 27(6), 1316-8 (1979). The content of α-tocopherol in pepper fruits (*Capsicum annum* L.) and its stability during dehydration and storage were determined. Our data show that the three pepper varieties used in this study, regardless of stage of maturity, contained from 9000 to 10000 μg of α-tocopherol/g of oil (oleoresin). The α-tocopherol content in the fresh pepper and its dry matter was found to depend on the content of lipids which in turn depends on ripening stage and genetic variety factors. During dehydration the loss of α-tocopherol in red pepper fruits was less than 5%. The α-tocopherol was found to be unstable in powdered pepper stored at low water activity, a_W, but very stable at high a_W. The large amount of α-tocopherol found in the fresh ripe fruits, ca. 3-10 mg/100 g, indicates that this vegetable could become an important source of vitamin E in the human diet.

LACK OF REGIOSELECTIVITY IN FORMATION OF OXOHYDROXYOCTADECENOIC ACIDS FROM THE 9- OR 13-HYDROPEROXIDE OF LINOLEIC ACID. H.W. Gardner and R. Kleiman (Northern Regional Res. Center, U.S. Dept. of Agr., Peoria, Illinois 61604) *Lipids 14*(10), 848-51 (1979). Either 9-hydroperoxy-*trans*-10,*cis*-12-octadecadienoic acid or 13-hydroperoxy-*cis*-9,*trans*-11-octadecadienoic acid was treated with the catalyst, cysteine-$FeCl_3$, in the presence of oxygen. Oxohydroxyoctadecenoic acids were among the many products formed as a result of hydroperoxide decomposition. A mixture of 9(13)-oxo-13(9)-hydroxy-*trans*-11(10)-octadecenoic acids (δ-ketols) was produced from either isomeric hydroperoxide. The formation of isomeric δ-ketols from 9-hydroxy-*trans*-12,13-epoxy-*trans*-10-octadecenoic acid (epoxyol), a known product of 13-hydroperoxy-*cis*-9,*trans*-11-octadecadienoic acid decomposition, implies that the epoxyol is an intermediate. The mechanism was elucidated by the facile conversion of the epoxyol (methyl ester) to methyl 9(13)-oxo-13(9)-hydroxy-*trans*-11(10)-octadecenoates with a Lewis acid, BF_3-etherate.

THE SOLID STATE ACYL SHIFT OF DIGLYCERIDES: AN ELECTRON DIFFRACTION STUDY. D.L. Dorset and W.A. Pangborn (Medical Foundation of Buffalo, Inc., 73 High St., Buffalo, NY 14203) *Chem. Phys. Lipids 25*(2), 179-89 (1979). The progress of the solid state acyl shift of 1,2-diglycerides to 1,3-diglycerides is followed at room temperature in single dipalmitin microcrystals by electron diffraction. The β′ form, rather than the α-form of the 1,2-isomer, transforms to the 1,3 product. The β′ form packs in the monoclinic paraffin fashion, i.e. the O_1 methylene subcell and a chain tilt of 27 degrees about the long subcell axis. After the isomerization, the chain tilt (14 degrees to surface normal) occurs around the b_s^* axis of the resultant $T_{||}$ methylene subcell.

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