finished salad dressing containing all the necessary oil, flavor and aqueous materials is formed.

DEEP FRY OIL-FILTERING UNIT, METHOD, AND APPARATUS. R.D. Van Vleet. *U.S. 3,616,907.* The oil from the fryer is pumped through a portable filtering unit.

CONTINUOUS HIGH TEMPERATURE PROCESS FOR RECLAIMING REUSABLE FRYING FATS. E.R. Lowrey and R.O. Schmitt (Proctor and Gamble). *U.S. 3,616,909.* Particles are continuously removed from the frying oil in a centrifugal separator.

MARGARINE FAT AND PROCESS FOR PREPARING THE SPREAD. H.A. Graffelman (Lever Bros.). *U.S. 3,617,308.* The hard stock comprises 8–15% of the composition and consists of vegetable oil containing predominantly 16–18 carbon atom fatty acids interesterified with fully hardened palm kernel oil. The soft stock consists of liquid oil containing at least 40% linoleic acid.

POTATO AND POTATO CHIP FLAVOR AND AROMA. S.S. Chang and B.R. Reddy (Research Corp.). *U.S. 3,619,211.* A flavor and aroma reminiscent of potato and potato chip is prepared by heating methionine or a mixture of methionine and a reducing sugar in the presence of an oil such as a frying oil. The flavor can also be imparted to foods such as snack foods by adding methionine to the foods before frying. Similarly, the flavored oil can be used in the manufacture of various food products for conveying the potato flavor.

DARKENING RESISTANT FRYING FAT. D.J. Hayes and V.E. Weiss (Proctor and Gamble). *U.S. 3,619,213.* The frying fat contains 0.05–0.7% of pyrogenic silica which retards darkening during long periods of use.

SINGLE PHASE COMPOSITION. E.J. Conklin (Proctor and Gamble). *U.S. 3,620,712.* The composition consists of methyl esters of C_8-C_{12} fatty acids and specific nonionic emulsifiers, coupled with a critical amount of water. The ratio of esters to emulsifier can range between 1:1.2 and 3:1.

FRACTIONAL CRYSTALLIZATION PROCESS. K. Saxer (Metallwerk Aktiengesellschaft Buchs). *U.S. 3,621,664.* The fluid flows down a cooled surface and crystallizes thereon. Each step comprises a single crystallization and all steps of a complete cycle are carried out within a single unit.

APPARATUS FOR AUTOMATICALLY SHAKING FILTER CAKE IN A FILTER PRESS. K.-I. Kurita (Kurita Machinery Mfg. Co., Osaka). *U.S. 3,622,005.* The device is suspended above the press, and as the plates are opened, the device shakes each filter cloth in turn.

PUDDING COMPOSITION CONTAINING LIPID ESTER. J.L. Hegadorn, R.R. Ferguson, and B.J. Bahosky (General Foods). *U.S. 3,619,209.* The pudding contains a lipid ester surfactant which helps to reduce sticking to the pan and scorching during preparation.

PROPYLENE GLYCOL MONOESTER EMULSIFIER-CONTAINING SHORTENINGS AND CAKE MIXES CONTAINING THEM. M.K. Gupta (Proctor and Gamble). *U.S. 3,622,345.* The emulsifier has a particular ratio of fatty acid ester chains to provide high specific volume cakes. The shortenings have a relatively high solids content at room temperature, a relatively low solids content at mouth temperature, and some solids remaining at the highest storage temperature normally encountered.

METHOD OF RECOVERING WATER-FREE FATTY ACID DISTILLATES BY SELECTIVE CONDENSATION. R.W. West (Carrier Corp.). *U.S. 3,622,466.* The method involves spraying the liquid fatty acid into direct heat transfer relation with the vaporous mixture in a vessel subject to an equilibrium condition enabling condensation of the fatty acid vapors only.

• Fatty Acid Derivatives

SYNTHESIS OF ISOPHYTOL. K. Suga, S. Watanabe and Y. Yamaguchi (Dept. Applied Chem., Chiba Univ., Chiba-shi, Japan). *Yukagaku* 20, 356–9 (1971). Isophytol, a starting material of α-tocopherol synthesis from hexahydro-ø-ionone, was synthesised. Synthetic conditions were investigated in detail.

• *Obituary*

Word has been received of the death of Donald E. Johnson, Chemist, Spencer Kellogg Division of Textron, Minneapolis, Minn. Johnson joined AOCS in 1964.

UTILIZATION OF ACYLOINS. I. THE SYNTHESIS OF SATURATED KETONES AND HYDROCARBONS. Y. Abe, Y. Nakamura, A. Iwasaki and N. Ono (Faculty of Eng., Keio Univ., Maehara, Koganei, Tokyo). *Yukagaku* 20, 224–9 (1971). A series of C_8-C_{36} symmetrical and mixed acyloins could be synthesized by condensation of fatty acid methyl esters in the presence of a metallic sodium dispersion in an inert solvent such as xylene. The mass spectroscopy of mixed acyloins showed that the reaction of fatty acid mixture generally gave mixed acyloins, in which the longer chain had a carbonyl group and the shorter chain carried a hydroxyl group. The acyloins produced were reduced to the corresponding unsymmetrical ketones by Clemensen method. The hydroxyl group changed to methylene group, but carbonyl groups unreacted in the reduction. The Clemensen reduction of long chain ketone did not give the corresponding hydrocarbon, while Wolff-Kishner reduction gave the hydrocarbon in rather good yield.

PREPARATION OF EDIBLE GRADE PROPYLENE GLYCOL MONOSTEARATE. A.P. Necaev *et al. Izv. Vysshikh Uchebn. Zavedenii, Pishchevaya Tekhnol.* 1971(4), 27–8. It was found necessary to carry out the reaction with a molar ratio of stearic acid to propylene glycol of 1:5 using toluene sulfonic acid as a catalyst at 100C. The product was purified by extraction with hexane and crystallization from the hexane solution at −10 to −15C. (Rev. Franc. Corps Gras)

TEXTILE FABRIC SOFTENER. L.T. Murray (Colgate-Palmolive). *U.S. 3,620,807.* The composition contains either a fabric-softening quaternary ammonium salt and an alkali metal borohydride or the corresponding quaternary borohydride. It imparts softness without yellowing to textiles.

SOPHOROSIDE ESTERS IN PREPARED FOOD PRODUCTS. R.P. Allingham (Pfizer, Inc.). *U.S. 3,622,344.* Sophoroside alky esters of certain C_{16}-C_{18} monohydroxy fatty acids, wherein the alkyl groups contain from 2 to 18 carbon atoms, show highly desirable effects in improving the properties and general eating characteristics of starch based and emulsion based food products at levels of 0.01–3% of the product.

SYNTHETIC POLYAMIDES OF A DIMERIC FATTY ACID, A LOWER ALIPHATIC CARBOXYLIC ACID ETHYLENE DIAMINE, AND A CO-DIAMINE. M. Drawert and E. Griebsch (Schering AG). *U.S 3,622,604.* Methods for preparing the polyamides are disclosed. The products are useful as binders in the formulation of printing inks.

PROCESS FOR PREPARING HYDROXYCARBOXYLIC ACID ESTERS. K. DeJong and B. Van der Ven (Lever Bros.). *U.S. 3,622,605.* Aliphatic δ-hydroxy carboxylic esters, *e.g.*, δ-hydroxydecanoic acid and δ-dodecanoic glycerides, which are flavoring agents for fatty foodstuffs, are prepared by the acid catalyzed reaction of a δ-lactone with a polyhydric alcohol until at least 80% of the ester present at equilibrium in the esterification reaction has been formed. The acid catalyst is removed before 10% of the lactone polymer is formed.

POLYETHYLENIMINE FATTY ACID EPICHLOROHYDRIN PRODUCT. J. Longoria (Dow Chem. Co.). *U.S. 3,622,528.* An improved polyethylenimine adduct for cellulosic products is prepared by condensing polyethylenimine with 0.05–0.4 mole of C_{12}-C_{22} fatty acids and thereafter capping the residual free amino groups by reaction with epichlorohydrin in aqueous solution at 0–50C. The resulting product is an effective softener, sizing agent, and wet-strength additive for paper and other cellulosic products with superior color stability and increased resistance to yellowing.

• Biochemistry and Nutrition

LOSS OF LIPID TO PLASTIC TUBING. K.Y. Lee (Dept. of Phys., Univ. W. Australia, Nedlands, W. Australia 6009). *J. Lipid Res.* 12, 635–6 (1971). ^{14}C-labeled oleic acid and ^{3}H-labeled monoether in a bile salt solution were perfused through three types of plastic tubing. Large porportions of lipid were lost to the walls of silicone rubber and polyvinyl chloride tubes. The major portion of the lipid lost was recoverable only when chloroform-methanol was perfused through the tubings. On the other hand, very little lipid was lost to the wall of polyethylene tubing. Polyethylene tubing should therefore be used in perfusion studies involving lipid-soluble compounds.

UTILIZATION OF FATTY ACIDS IN PERFUSED HYPOTHERMIC DOG KIDNEY. J.S. Huang, G.L. Downes, and F.O. Belzer (Dept. of Surgery, Univ. Cal., San Francisco, Cal. 94122). *J. Lipid Res.* 12, 622–7 (1971). Utilization of oleic acid in whole