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## Abstracts

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### Oils and Fats

Edited by  
**M. M. PISKUR**

*Cl. 42L. Fette u. Seifen 47, 465 (1940).* The app. is arranged to record the pressure exerted in cutting a sample of butter or margarin with one or more cutters.

COMESTIBLE. A. S. Schultz and C. N. Frey (Standard Brands, Inc.). *U. S. 2,223,465.* Yeast is stabilized and improved in regard to cutting qualities and color by incorporating a lauric acid partial ester of a polyhydric alc.

TREATMENT OF FATTY COMPOSITIONS AND PRODUCT. G. D. Martin (Monsanto Chem. Co.). *U. S. 2,225,124.* An oxidizable fatty material stabilized against the development of color and rancidity by having incorporated therein a small amt. of an N-aryl thiourethane or N alicyclic thiourethane is described.

PROCESS OF OBTAINING STEROL GLUCOSIDES AND STEROLS FROM FATTY SUBSTANCES. H. R. Kraybill and M. H. Thornton (Purdue Res. Foundation). *U. S. 2,225,375.* The process of obtaining sterols from a fatty substance which consists in sepg. it by selective adsorption into a portion which contains phosphatides and mucilages and a portion which contains sterols but is substantially free from phosphatides and mucilages, extracting the second portion with organic sterol-dissolving solvent which when cold is substantially immiscible with the oil, and sepg. the sterols from the solvent, is described.

PROCESS FOR THE MANUFACTURE OF DRYING OILS. R. Priester (Naamlooze Vennootschap Industrieele Maat-

schappij Voorheen Noury & Van Der Lande. *U. S. 2,226,830.* Hydroxyl groups are split from castor oil by heat treatment with persulfuric acid compds. *U. S. 2,226,831.* Castor oil is dehydrated and then treated with alc. to esterify the free acid formed in the dehydrating process and that formed in the heat bodying of the oil.

WAXING AND POLISHING COMPOSITION. W. O. Pool and J. Harwood (Armour and Co.). *U. S. 2,225,392.* A waxing and polishing compn. contg. as a waxing constituent an N-alkyl phthalimide in which the alkyl group is a fat acid contg. at least 5 C atoms.

ZIRCONIUM SALTS OF WATER-INSOLUBLE FATTY ACIDS AND METHOD OF MAKING SAME. C. J. Kinzie and E. Wainer (Titanium Alloy Mfg. Co.). *U. S. 2,221,975.* In the production of zirconium salt of a water-insol. fatty acid, the step which consists in mixing an aq. sapond. soln. of said acid with a water-sol. inorg. salt of zirconium in the ration of 1 mol of  $ZrO_2$  to 2 mols of said acid at temps. between 50° C. and 75° C. is described. The products are used for producing opalescent or flat finish in fibers, films, varnishes, paints, lacquers, and the like.

SOLUBLE CUTTING OIL AND METHOD OF PREPARING THE SAME. P. T. Anderson and H. L. Moir (Pure Oil Co.). *U.S. 2,211,250.* The oil contains a mineral oil and a minor portion of fatty material which has been sulfurized and then phosphorized.

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## Abstracts

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### Soaps

Edited by  
**M. L. SHEELY**

SYNTHETIC GLYCERIN FROM PETROLEUM. E. C. Williams, Shell Dev. Co. *Chem. Met. Eng. 47, 834 (1940).* Propylene is reacted with chlorine, resulting in direct attack of the methyl group with the consequent formation of allyl chloride—about 85% yield. Allyl chloride is hydrolyzed to allyl alcohol with sodium carbonate. Chlorine is added to aqueous allyl alcohol. The resulting solution is neutralized and then hydrolyzed with sodium bicarbonate. Glycerine is recovered by neutralizing the hydrolysate, condensing, filtering, and finally vacuum distilling the glycerin.

WETTING AGENTS, THEIR STRUCTURE, CHARACTERISTICS AND USES. C. A. Sluhan. *Am. Dyestuff Repr. 30, 1-4, 18-20 (1941).* The author deals with the general subject of surface active chemicals as applied to wetting, dispersing, and detergency. It is pointed out that these operations are distinct and sep., although detergency does involve wetting, and dispersing action. It is shown that wetting agents differ in mol. configuration from detergent type products or dispersing agents. The structure of the mol. with its attendant effect on wetting power, soly., and foaming is also discussed. Comparison is made of anion and cation surface active chemicals and a number of applications in various industries is cited. The importance of selecting the proper type of surface active chemical for applications of wetting, dispersing, or detergency is emphasized.

SURFACE ACTIVE AGENTS IN THE DEGUMMING OF SILK HOSIERY. O. Morgan and H. Seyferth. *Dyestuffs 36, 188 (1940).* The present hosiery degumming tests have shown that the amount of soap to be used for best results is rather critical. The addition of alkali to soap adversely affects the handle and the elasticity of the hosiery. The use of alkali alone is not feasible since there is not enough dispersing ability in the system to render the insoluble scums free rinsing and dyeing and finishing troubles are encountered. With a degumming oil a poor hand is obtained as well as poor dyestuff efficiency. When handle appearance, dyestuff efficiency, elasticity, endurability and cost are all considered it becomes very obvious that the present work with surface active agents and suitable alkalies has revealed a desirable and economical method of degumming silk.

Following their examination of the hosiery discussed in this paper, the United States Testing Company arrived at the following conclusions: "From the results of our tests it is our opinion that the use of Nacconol with sodium silicate has definite advantages over the use of soap alone and soap and alkali in the degumming of silk hosiery, since it apparently produces the most satisfactory finished stocking and materially aids in the retaining of pliability and elasticity which are the prime requisites of silk stocking."

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## Soaps

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M. L. SHEELY

IRRITATION OF SOAPS ON HUMAN SKIN. Leroy D. Edwards. *Soap* 16, 12, 33 (1940). Experiments show that (1) as a rule, potassium soaps are more irritant than sodium soaps on both male and female, (2) lauric and myristic acids produce, by far, the most irritant soaps, and (3) soaps of acids possessing double bonds and substituted groups vary markedly in irritant action from the saturated acid soaps of the same carbon length.

Soaps made from refined oils are not always irritant in the same order as the fatty acid comprising the major constituent of the oil. For example, castor oil soaps are decidedly irritant while ricinoleic acid soap is very mild. The irritant action of binary soap solutions is being investigated.

WETTING AGENTS, THEIR STRUCTURE, CHARACTERISTICS AND USES. C. A. Sluhan. *Am. Dyestuff Repr.* 30, 1-4, 18-20 (1941). The author deals with the general subject of surface active chemicals as applied to wetting, dispersing, and detergency. It is pointed out that these operations are distinct and sep., although detergency does involve wetting, and dispersing action. It is shown that wetting agents differ in mol. configuration from detergent type products or dispersing agents. The structure of the mol. with its attendant effect on wetting power, soly., and foaming is also discussed. Comparison is made of anion and cation surface active chemicals and a number of applications in various industries is cited. The importance of selecting the proper type of surface active chemical for applications of wetting, dispersing, or detergency is emphasized.

AT THE SOAP PAN. J. M. Vallance, *Soap, Perfumery, Cosmetics* 13, 848-50, 862 (1940). Review of developments in textile soaps, industrial uses of soaps, soap patents and filling and building agents is presented.

### PATENTS

SOAPS FOR TEXTILES. U.S. 2,224,360. Meindert Dan-ius Rozenbroek to ( $\frac{1}{2}$ ) Chemische Fabriek Servo and ( $\frac{1}{2}$ ) Naamlooze Vennootschap. A process for the manufacture of a mixed ester suitable for textile purposes comprising esterifying at least one hydroxy group of an acid selected from the group consisting of boric, phosphorous and phosphoric acids with an aliphatic hydroxy compound of high molecular weight and esterifying at least one or other hydroxy group of said acid with a lower monohydroxy compound, both hydroxy compounds belonging to the group consisting of alcohols, partial ethers of an alcohol with a lower polyhydric alcohol, and partial esters of a fatty acid with a lower polyhydric alcohol, and sulphonating in any desired stage of the process of manufacture of the mixed ester.

STABILIZED SOAP. U.S. 2,221,333. Robert Sibley to Monsanto Chemical Co. A soap comprising a water-soluble salt of a higher fatty acid stabilized against deterioration and development of rancidity by having incorporated therein more than 0.01% of a monoaryl substituted biguanide.

TEXTLE SIZING. U.S. 2,207,229. Laurence Sherman to National Oil Products. In a process of preparing filling yarns for weaving into a crepe fabric, the step which comprises sizing hydrophilic artificial cellulose

yarns with potassium oleate and a mixture of glyceryl mono and dioleates.

SAPONIFICATION OF FATS AND OILS. U.S. 2,221,799. Martin Ittner to Colgate-Palmolive-Peet Co. The method of hydrolyzing fats and oils which comprises concurrently heating the fatty material with liquid water to temperatures in excess of about 185° C. for a sufficient length of time to effect a substantial degree of hydrolysis, thereafter maintaining the temperature so that it is above 185° C. but substantially below about 287° C., separating the resulting aqueous glycerin from the fatty material, and completing the hydrolysis of the fatty material by bringing it into countercurrent contact with liquid water at temperatures above about 200° C., but below the temperature at which a single phase is formed and at a pressure substantially above the pressure of saturated steam at the highest temperature employed in said countercurrent operation.

APPARATUS FOR RECOVERING GLYCERINE. Benjamin Clayton (Refining, Inc.). U.S. 2,218,279. A high speed apparatus for making soap and recovering relatively pure glycerin comprising, in combination: a heating device, means for discharging a saponified mixture of soap and glycerine from said heating device as a continuous stream, an evaporating chamber, a spraying nozzle adapted to direct said stream along the interior surface of the wall of the said evaporating chamber so that the same descends slowly as a film thereby permitting sufficient time to vaporize substantially all of the glycerin therefrom without decomposition to the soap, means for withdrawing said vaporized glycerin and condensing the same, means for introducing superheated steam into said evaporating chamber to assist in the removal of the glycerin vapors from said chamber and maintain the temperature of said soap above the melting point when anhydrous, said spraying nozzle being constructed and arranged so that the superheated steam and the vaporized glycerine ascend within said chamber without colliding with the saponified mixture being introduced thereto whereby the glycerine removed and cooled is substantially free of foreign matter.

FLOATING MILLED SOAP. John Bodman (Lever Brothers Co.). U.S. 2,215,539. A process for making a floating soap with a uniformly aerated continuous mass and having a characteristic texture and firmness similar to milled soaps and shape-stability, comprising subjecting a soap mass having a moisture content of approximately 15% to a temperature of at least substantially 160° F. to form a continuous mass, aerating the continuous mass with a compatible gas and forming the mass into bars or cakes.

PROCESS FOR PREVENTION OF RANCIDITY IN SODA SOAPS. Viktor Dabsch and Julius Vredenburg. *German* 682,329. Process for prevention of rancidity of soda soaps which contain in their fat charge liquid fatty oils with an iodine number of 70 or their fatty acids in such quantities that deterioration of the finished soap takes place on storage, characterized by adding to the soap, after removal of undesirable constituents (excess alkali, chloride, etc.) while the soap is still liquid, small quantities of glycerine or other alcohols alone or in mixture with small quantities of trisodium phosphate.