

ABSTRACTS

Oils and Fats

Edited by
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PRODUCTION OF FATTY LIVERS IN GUINEA PIGS WITH SCORBUTOGENIC DIETS. M. A. Spellberg & R. W. Keeton. *Proc. Soc. Exptl. Biol. & Med.* 41, 570-2 (1939). Scurvy produced in guinea pigs by the scorbutogenic diets usually is accompanied by severe fatty degeneration of the liver. This process is slightly retarded by addnl. carbohydrate in the diet. These diets are apparently deficient in some other factor or factors, whose presence is necessary for normal liver physiology and morphology.

PATENTS

TREATMENT OF NONMINERAL FATTY MATTER RAFFINATES. W. J. Hund and L. Rosenstein. (to Shell Development Co.). *U. S.* 2,164,012. Amines and amine soaps that may be in oils that were refined with amines are removed by washing with very dilute acids.

FATTY MATTER REFINING PROCESS. W. J. Hund and D. H. Rowe (to Shell Development Co.). *U. S.* 2,164,189. Free fatty acids, coloring bodies, mucilaginous material, etc., are removed from fats with a continuous countercurrent extn. process.

TREATMENT OF FATTY ACIDS. F. G. Amther & G. Zinzalian (to Wecoline Products, Inc.). *U. S.* 2,162,542. The color of fatty acids is preserved by addg. a small amt. of oxalic acid.

TREATMENT OF OLEO OIL. H. S. Mitchell (to Indus. Pats. Corp.). *U. S.* 2,163,912. Small quantities of hydrogenated refined soybean oil are added to oleo oil to stabilize the latter.

CATALYST, HYDROGENATION PROCESS AND PRODUCT. L. G. Jenness (to Intermetal Corp.). *U. S.* 2,163,602-3; 2,164,291. Mixts. of 6:1 NiO and CrO₃ or 13:1 NiO and Al₂O₃ are prepd. The CrO₃ or Al₂O₃ is dissolved off and the remainder is reduced. Soybean oil hydrogenated with this catalyst at 280-380° F. at the rate of a drop of 15 I nos. per hr. to 110 and further hydrogenation yields a product that is resistant to reversion.

INCREASING THE DRYING PROPERTIES OF OIL. M. R. Coe. *U. S.* 2,165,130. The drying properties of drying and semidrying oils are increased by incorporating a plant pigment (a photosensitizer) into the oil and exposing the product to light rays of inducing autoxidation.

PROCESS OF PREPARING NITROGEN-CONTAINING COMPOUNDS. A. W. Ralston & W. M. Selby. *U. S.* 2,164,284. Nitrile compounds are prepd. by heating waste proteins of the packing, fish and leather industries with fats to 250-350° C.

COMPOUNDED LUBRICATING OIL. G. L. Neely & F. W. Kavanagh (to Standard Oil Co.). *U. S.* 2,163,622. Oleic and / or stearic acid is used in the mineral oil lubricant.

CORRECTION: See *Oil & Soap* 14, 121 (1939). The number of the patent entitled "Method of controlling the plasticity of hydrogenated glyceride oil" should be changed to *U. S.* 2,154,452.

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Soaps

Edited by M. L. SHEELY

ACTION OF SOAP ON SKIN. I. H. Blank. *Arch. Dermatol. Syphilol.* 39, 911-24 (1939). Satd. fatty acids of low mol. wt. yield a much higher percentage of pos. skin reactions in the patch test than do acids of high mol. wt. . . . It is suggested that in soap neither the alk. nor fat acids alone are responsible for the irritation, but that each is a contributing factor. The higher the mol. wt. of the fatty acid the more alkali will be required before irritation results. In 150 cases of contact or atopic dermatitis, a mixt. of 25% sulfonated mixed olive and teaseed oils, 25% liquid petrolatum and 50% water at approx. pH 6.5 was substituted for soap. Irritations followed the use of the mix in less than 10% of cases. In 18 cases in which there were remissions with the use of the oil mixt., relapses occurred when soap was again used. (*Chem. Abs.*).

EXTRACTION OF SAPONIN FROM SOAP NUT. J. L. Sarin and M. L. Beri. *Ind. & Eng. Chem.* 31, 712-3 (1939). A method has been worked out for the extn. of saponin from soap nut, a raw material which is found abundantly in India. This method is efficient and is practicable commercially. The yield of saponin was 17.21% of the wt. of the nut. The soap nut saponin prepd. could be utilized for the same purposes as

saponin from other sources — e. g., as an emulsifying agent for vegetable and essential oils, as a foam stabilizer and in the manuf. of soapless shampoos.

SULFONATION OF NAPHTHENANILIDE, STEARANILIDE, ETC. Henri Blum *Bull. soc. ind. Mulhouse* 105, 113 (1939). Napthenanilide and the anilides of the fatty acids such as stearic acid and palmitic acid can be sulfonated by the action of fuming sulfuric acid. The resulting sulfonic acids and their salts are good emulsifiers. They prevent the pptn. of fatty acids from soaps in the presence of acids and hold free fatty acids in aq. soln. even in the presence of Al acetate and other salts. They can be used to incorporate fatty acids in dyeing with alizarin and other dyes. (*Chem. Abs.*).

THE DEPENDENCE OF THE VISCOSITY OF FATTY ACIDS OF HIGH MOLECULAR WEIGHT UPON THE TEMPERATURE AND UPON THEIR DEGREE OF SATURATION AND UNSATURATION. G. B. Ravich *Compt. rend. acad. sci. U. S. S. R.* 22, 34-6 (1939). The viscosity (in centipoises) of linolenic, linoleic, oleic or stearic acids or mixts. of linolenic and linoleic or oleic and stearic acids decreases linearly with increase in Hubl I value, and also decreases with increase in temp. Equations are developed for calcn. of the viscosities of the

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above fatty acids from the temps. and I values. (*Chem. Abs.*).

PATENTS

BRUSHLESS SHAVING CREAM. W. Kritchevsky (to Rit Products Co.) *U. S. 2,164,717*. Phosphatides are used as emulsifiers in brushless shaving cream.

EMULSIONS. W. Schrauth & Stickdorn (to Deutsche Hydrierwerke Akt.). *U. S. 2,164,723*. A base for therapeutic and cosmetic compns. comprises a fatty alc., water and a resin alc. in quantity sufficient to bind the water and produce a homogeneous mass.

DETERGENT COMPOSITION AND PROCESS OF MAKING SAME. S. J. Miller, B. Sway and E. P. Breckel (to Du Bois Soap Co.). *U. S. 2,162,023*. A powdered granular detergent contains: 25% soap powder, 5% cresylic acid, 3% diethylene glycol, 40% trisodium phosphate and 25% absorbent earth.

FUNGICIDAL SOAP. W. M. Corbett. *U. S. 2,160,834*. The fungicidal soap contains small amts. of sodium thiosulphate and CuSO_4 .

PROCESS FOR MANUFACTURING SOAP. C. Leyst-Kichenmeister. *U. S. 2,158,663*. Waste lye derived from cellulose industries together with freshly prepd. NaOH is used for saponifying fatty material.

STABILIZE COLOR IN SOAP. Robert F. Heald to Colgate Palmolive Peet Co. *U. S. 2,162,255*. Soap-colored by a natural coloring material present in an oil or fat from which the soap, at least in part, is made, which coloring matter is stabilized by the addition of a small amount of a tin compound to the soap.

SOAP PRODUCT. Lever Brothers and Unilever Ltd. *Fr. 835,274*. Ortho- or polyphosphates of alkali metals are mixed with Na soaps derived from polyethylenic fat acids such as linoleic acid, or from mixts. of such acids with mono-ethylenic fat acids such as oleic acid with or without stearic, palmitic, laurie or myristic acid. The soap propns. obtained may be dissolved in hard water without causing inconvenient pptn. of insol. soaps and without formation of scum.

GLYCEROL, GLYCOLS AND LIKE COMPOUNDS *Brit. 499,417*. Association of American Soap and Glycerine

Producers Inc. Glycerol (I) and I-like products are prepd. by treating with H a carbohydrate contg. a larger no. of C atoms than the product obtained, in the presence of a Cu aluminate catalyst. The catalyst is obtained in known manner by heating oxide-producing compds. of Cu and Al_2O_3 to 750-1100° until an acid-insol. cocoa colored product results. It may be promoted most simply by an addn. of alkali. In an example, sucrose-10, catalyst, with a small addn. of sodium carbonate 0.75, and MeOH 10 parts are treated with H at about 1700 lb. per sq. in. at 250°. The product contains propyleneglycol 45.8, I 21.5 and less volatile I-like products 6.8%. In a 2nd. example, dextrose is similarly treated.

POURING CARTON *U. S. 2,162,632*. Eustace C. Meek to Colgate Palmolive Peet Co. A pouring carton for granular material including a box member formed of paperboard material, two relatively wide side wall panels and two relatively narrow side wall panels positioned between said wide side wall panels, an end closure for said box member formed by a tuck-in flap hinged to and extending from each of said narrow side wall panels, and superimposed overlapping end closure flaps extending from said wide said wall panels, adhesive means for securing said flaps together, one of said tuck-in flaps having a rectangular-shaped punch-in portion severable from its flap along all side edges, and said end closure flap super-imposed over the end closure flap last named having a generally circular punch-in portions when pushed inwardly defining a generally circular pouring opening and a rectangular-shaped inclined guide element for guiding the granular material thereover in a smooth flow through said pouring opening.

SOAP. Deutsche Hydrierwerke A.-G. *Brit. 499,402*. These agents, for soln. in H_2O , comprise soaps of aliphatic acids, having at least 6 and not more than 12 C atoms in the acid residue, together with phenols or their homologs or substituted derivs. menthol, or ethereal oils contg. OH groups. Soaps of caprylio, m-cresol, chloroxylenol, chlorothymol and chlorocarrvacrol are mentioned as other constituents of the compns. Soaps of acids having more than 12 C atoms, e. g., of ricinoleic and oleic acids, may be added in making compns. with less of the lower acids than would otherwise be required.