Abstracts

Soaps

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SOAP AND THE "SOAP PROBLEM." Herman Sharlit. *N. Y. State J. Med 43,* 160-2 (1943). The role of alky., fatty acids, wetting-agent compd. products and hydrophilic oils in the production of dermatitis by soap is considered. "Superfatted soap" offers a partial solution of the "soap problem." An exptl. soap, called an "oleaginous soap," was prepd. which contained over 10% free vegetable oil, was safe against rancidity, had excellent lathering properties even in hard water, was of satisfactory hardness and contained a typical fragrance. This soap was satisfactory to persons who could not previously tolerate soap and to many who had found superfatted soap unsatisfactory. *(Chem. Abs.)*

AN OLD STAND-BY—SOAP. George Leffingwell and Norman Radin. *Paper Ind. Paper World 24,* 1035-6 (1943). A brief review of its applications in papermaking and processing with 18 references. *(Chem. Abs.)*

THE USE OF PROTEINS IN THE SOAP INDUSTRY. F. Wittka. *Allgem. Oel- u. Fett-Ztg. 38,* 309-15 (1941); *Chem. Zentr. 1942 I,* 129. The patent literature on the use of proteins in soap is discussed and some manufg. methods are presented. Some of the proteins that are used in soap are: milk casein, glue, decompn. products of glue, plant proteins from various seeds, egg white, blood serum, yeast, keratin, silk fibroin, and fish proteins. They are used for economy and improvement (as sudsing) of the product. *(Chem. Abs.)*

SOAPS AND OTHER DETERGENTS. H. P. Trevithick, *et al. Proc. Am. Soc. Testing Materials, Preprint No. 70,* 7 pp. (1942). Detailed methods are given for the chem. analysis of industrial metal-cleaning compns. in solid, paste or liquid form. Tentative specifications for compd. chip soap with rosin, powd. soap with rosin, and built soap are also given. *(Chem. Abs.)*

TESTS FOR MILDNESS OF SOAP. D. J. Kooyman and F. H. Snyder. *Arch. Dermatol. Syphilol. 46,* 846-55 (1942). The irritative and possible sensitizing effects of soaps, though normally slight, can't be measured by patch and arm immersion tests. Various devices and techniques are compared. The reactions of a series of subjects are used to compare different products. *(Chem. Abs.)*

THE PRODUCTION OF STABLE TECHNICAL EMULSIONS. A. K. Chertavskikh. *Tsvetnye Metal 15,* No. 12, 76-80 (1940); *Chem. Zentr. 1942 I,* 1167. In the machining of metals under pressure, emulsions of Na and K soaps could be replaced by emulsions prepd. from 3:4 mixts. of vegetable and mineral oils using soda and $NaHCO_3$ as emulsifying agents. Handy cakes were produced by heating a 2:1 mixt. of oil and emulsifying agent for a period depending upon the temp. and amt. of material (10-15 min. for 20-30 g. of mixt. at 150-80°). Care was exercised to prevent carbonation. Upon proper diln. with water, these cakes gave emulsions of the desired consistency and showed no change in properties even after storage for several months. Emulsions from hardened oil and Na oleate soaps possessed the greatest stability; those from castor-oil and naphthalene soaps possessed least stability. The marked tendency to sep., at first shown by emulsions from colophony soaps, decreased with time. More-stable emulsions were obtained with distd. water than with tap water because of the pressure of Ca and Mg salts in the latter. *(Chem. Abs.)*

RESEARCH—ITS PLACE IN THE MODERN SOAP PLANT. Alan Porter Lee. *Soap 19,* No. 3, 25-7 (1943). A short review of the methods and uses of research in the soap plant.

THE CASE FOR ABRASIVE HAND SOAPS. *Soap 19,* No. 3, 28-9, 61 (1943). An argument in favor of abrasive hand soaps.

THE LOWER HYDRATES OF SOAP. M. J. Buerger, L. B. Smith, A. De Bretteville, Jr., and F. V. Ryer. *Proc. Natl. Acad. Sci. U. S. 38,* 526-9 (1942). Relations between certain forms of soap suggested that the systems consist of 2 components. Heating tests, indicated that the α, β, and γ forms in sodium stearate have the formulas, NaSt. ½ H_2O, NaSt. ⅛ H_2O, and NaSt (St = stearate). X-ray powder patterns are reproduced for the lower hydrate and NaSt. The α-Na palmitate is also a hemihydrate. *(Chem. Abs.)*

THE CHARACTERISTICS OF SOAP HEMIHYDRATE CRYSTALS. M. J. Buerger. *Proc. Natl. Acad. Sci. U. S. 28,* 529-35 (1942); cf. preceding abstract. The crystallographic observations of α-Na stearate and palmitate published by Thiessen and Stauff are in error. Indexing of powder photographs of soap crystals is very questionable; no motion of symmetry can be obtained from powder photographs of crystals with such large cells as soaps. Equi- inclination Weissenberg and equalcone de Jong-Bouman photographs were taken. For stearate and palmitate, the centrosymmetrical symmetry is C2h, 2/m and the crystals are monoclinic. The diffraction symbol is 2/mA-/a. The cell dimensions for Na stearate, ½ H_2O are a 9.16A., b 8.00, c 103.96, and β 93° 43′; for Na palmitate, ½ H_2O they are a 9.13A., b 8.00, c 91.85. The crystals contain 16 hemihydrated mols. per cell. *(Chem. Abs.)*

PATENTS

METHOD AND APPARATUS FOR FOAM DETERMINATION. John Ross and Gilbert De Wayne (Colgate-Palmolive Peet Co.). *U. S. 2,315,983.* A method for measuring the foaming properties of liquids comprises causing a predetd. quantity of a liquid to fall in successive volumetric addns. from a predetd. ht. into a pool of a liquid to be tested having a laterally restricted space thereabove into which any foam formed may rise, and measuring the quantity of said foam in said space after the falling of said predetd. quantity of liquid.

DETERGENT COMPOSITION. Gilbert C. Toone and Lawrence H. Flett. *U. S. 2,316,194.* A shampoo comprises alkali anetal fat acid sulfoacetate (I), Na-citrate, Na-tartrate, Na-malate and for each part of I, 1.5 to 5 parts of 2-Et-hexylsulfoacetate.