Soaps

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DETERMINATION OF WATER IN GLYCEROL. M. I. Il'menev and M. P. Ovechkina. *Zavodskaya Lab. 9,* No. 3, 306-7 (1940); *Khim. Referat. Zhur. 1940,* No. 9, 56. Weigh approx. 50 g. of glycerol in a pear-shaped distn. flask with pieces of porcelain, add 25 cc. of BuOH and distil the mixt., shaking the flask after the temp. drops to below b. p. The end of the distn. in the analysis of tech. glycerol is detd. by the appearance of a yellow drop of tech. glycerol on the thermometer bulb. Cool the flask with glycerol, weigh and det. the content of water from the loss in wt. The BuOH used for the detn. can be recovered by adding KOH and distg. (*Chem. Abs.*)

GLYCERIN RECOVERY IN THE SMALL SCALE SOAP PLANT. N. G. Weir. *Soap Perfumery and Cosmetics 15,* 40-42 (1943).

THE PHASE BEHAVIOR OF LITHIUM PALMITATE WITH WATER AND WITH LITHIUM CHLORIDE AND WATER. Marjorie J. Void. *J. Am. Chem. Soc. 65,* 465-69 (1943). The phase behavior of lithium palmitate in water has been determined and compared with that of sodium palmitate. Available phase diagrams for sodium and potassium soaps have been compared also. In concentrated soap systems and in dilute ones, the temperatures and compositions of corresponding points vary in a regular manner with the atomic number of the alkali cation, but at intermediate compositions (involving the middle soap phase) no simple general trends are apparent.

The effect of up to 2% of lithium chloride on the phase behavior of lithium palmitate and water has also been determined. The effect of lithium chloride can be regarded as favoring the formation of more highly organized phases over those in which more nearly random molecular distribution occurs.

ABSORPTION OF ULTRASONIC WAVES IN VISCOUS LIQUIDS. P. A. Bazhulin. *Compt. rend. acad. sci. U.R.S.S. 31,* 113-16 (1941) (in English). Preliminary results on the absorption of ultrasonic waves in glycerol within 6,000-20,000 and in castor oil within 4,000-16,000 kilohertzes are reported. (*Chem. Abs.*)

STUDIES IN THE DISSOLUTION OF SOAPS IN MIXED SOLVENTS. S. R. Palit. *J. Indian Chem. Soc. 19,* 271-85 (1942). Alkali metal salts of long-chain fatty acids show pronounced enhanced solvency in a mixt. of solvents composed of a polyhydric alc., a monohydric alc. or/and a hydrocarbon or a chlorinated hydrocarbon. Soly. data in various such binary mixts. have been presented, and a discussion of their relative solvent powers has been made. An explanation of such mix-solvency based on solvation of the different parts of the mol. through Van der Waals' forces and H bridge formation has been offered. Exptl. evidences to support this theory have been presented The necessary conditions for a solvent or mixt. to be powerful for soap dissoln. has been found out to be the presence of 2 adjacent (OH) groups and a hydrocarbon dissolving portion.

CONSERVATION IN SANITARY PRACTICES WITH ACID CLEANERS. V. Schwarzkopf. *Proc. Inst. Food Tech. 1942,* 37-42. Acid cleansers are recommended in place of alkalies for cleaning food-handling equipment. The compn. of the acid cleaning agent is not given. Acid reduces bacterial action and is economical.

PATENTS

WETTING AND PENETRATING COMPOUNDS AND METHOD OF PRODUCING THE SAME. Swanee Vitor Valjavee (Morton Chemical Co.). *U. S. 2,306,095.* The method of producing a wetting and penetrating agent comprises first reacting approximately one mole of an monohydric alc. with approx. one mole of a dicarboxylic acid anhydride to form a half ester and then reacting the half ester with an alkylol amine to amidate the remaining carboxylic group.

ALKALINE DETERGENT. C. Schwartz (Hall Laboratories, Inc.). *U. S. 2,303,397.* An alk. detergent compn. for soft metal comprises by wt. about 95% Na metasilicate and about 5% of a water sol. salt of a metal of the group consisting of Ba and Sr.

RECOVERY OF SAPONIN. G. J. Nord. *U. S. 2,301,787.* A process for the recovery of saponin from the juice of cactus plants and related species comprises expressing the juice from the plants, adding a diatomaceous filter aid to the expressed juice, agitating and filtering, then heating the clarified juice to a temp. of from 85° to 110°, then removing the pptd. matter, then rapidly cooling the filtrate to room temp. and then filtering the pptd. compds. insol. at said last mentioned temp. leaving a liquid rich in saponins.

TREATMENT OF ORGANIC SULPHATES. K. L. Russell, C. D. Miles, and A. C. Bell (Colgate-Palmolive-Peet Co.). *U. S. 2,303,582.* Alc. is used as a selective solvent for sepg. sulfated fat acids from impurities.

SOAP COMPOSITION. M. A. Kise and J. F. Vitcha (Solvay Process Co.). *U. S. 2,303,212.* A soap compn. adapted for use in hard water comprises a water-sol. soap and the Na salt of Et ester of the *a*-sulfonic acid deriv. of stearic acid, said soap and said Na salt being present in the compn. in ratios varying from 90 parts by wt. of said soap and 10 parts by wt. of said Na salt to 70 parts by wt. of said soap and 30 parts by wt. of said Na salt.

PERSONAL CLEANING COMPOSITION. B. T. Guild. *U. S. 2,303,932.* A personal cleaning compn. consists of non-irritating acid-imparting material and the sulphonated ether product of the reaction of alkylated mono-hydric phenol with a polyether deriv. of a material chosen from the group consisting of ethylene oxide, ethylene glycol and propylene glycol, said compn., when worked with water, yielding a soln. having a pH below 7 and above approx. 4 which is not irritating to the skin.