

ABSTRACTS

Soaps

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RECOVERY OF GLYCERIN. Dr. J. H. Wigner. *Soap, Perfumery and Cosmetics*, 12, 3, 231 (1939). The composition of the soap curd has an important bearing upon the proportion of glycerin it retains. The richest curds are produced when the percentage of salt in the lye is very little above the minimum required for satisfactory separation of the soap. The following table shows the percentage of water (or water plus glycerin) in soap curds of varying fatty acid content; salt, etc., in the lye being taken at 11%.

| Fatty acids % | Water % | Fatty acids % | Water % |
|---------------|---------|---------------|---------|
| 50 | 43.1 | 56 | 37.7 |
| 51 | 42.3 | 57 | 36.8 |
| 52 | 41.4 | 58 | 35.9 |
| 53 | 40.5 | 59 | 34.9 |
| 54 | 39.6 | 60 | 34.0 |
| 55 | 38.7 | 61 | 33.1 |

It would be desirable to determine directly the amount of glycerin in the spent lyes, but no analytical method known seems to be sufficiently exact to be of any great use for this purpose. The following figures may be useful for general guidance.

| Type of Soap | Ratio | | | |
|------------------------|---------------------------|-------------------------|------------------------------------|-----------------|
| | Glycerin in Raw Materials | of Lye to Raw Materials | Pctg. Glycerin Held in Avg. in Lye | Glycerin in Lye |
| Tiolet base | 11.1 | 1.94 | 88.2 | 5.0 |
| Soap powder base .. | 9.2 | 1.80 | 84.3 | 4.7 |
| Tallow-rosin | 7.8 | 1.46 | 81.2 | 4.4 |
| Palm oil-rosin | 5.62 | 1.03 | 73.1 | 4.0 |
| Good washer soap .. | 9.9 | 1.67 | 86.6 | 5.1 |

ANIMAL GLUE IN SOAPS. Hans Dorner. *Seifensieder-Ztg.* 65, 800-4 (1938). A study of German-made soaps contg. glue and D.'s own earlier work (cf. C.A. 22, 4852) leads to the conclusion that degradation of glue renders it less suitable for use in soap compns. (*Chem. Abs.*)

SAPONIFICATION METHOD. J. M. Vallance. *Soap*, 15, 3, 21 (1939). Fats, oils and perfumes used for soap-making call for special attention as possible cause of discoloration. Metallic contamination has to be guarded against. Over-rapid drying may occasionally give rise to trouble. The acids present in rosin are the prime cause of discoloration in heavily-rosined soaps. The judicious incorporation of an effective antioxidant is frequently an excellent precautionary measure.

THE SURFACE TENSION OF SOAP SOLUTIONS. Lottermoser. *Fette u. Seifen* 45, 595-6 (1938). During expts. on the surface tension of dil. soap solns. at equil. conditions as detd. by the Pt ring method, it was observed that discrepancies between check detns. became more serious the greater the diln. of the soap soln. The tendency of atm. CO₂ to liberate free fatty acids and thus lower the surface tension was eliminated by working in a CO₂-free atm. However, the discrepancies still persisted, probably because of low adsorption at the container walls or other solid

surface in contrast with the soln. Such adsorption tends to remove free fatty acids from soln.; this leads to more or less complete hydrolysis of the soap. (*Chem. Abs.*)

GLYCERINE SUBSTITUTE DISCOVERED. *World Trade Notes*. A substitute for glycerine consisting of 1:5 penta-methylene-glycol has recently been discovered in Germany.

PATENTS

A PROCESS OF TREATING LEATHER. Brit. 475,478. Meindert Danius Rozenbroek to N. V. Chemische Fabriekeservo. In the treatment of fibrous materials including leather, the use of a solution of an elaidinized soap containing a sufficient amount of the free fatty acid to render the solution substantially neutral to phenolphthalein. Brit. 473,760. In the treatment of fibrous materials including leather with aqueous baths, the use of a compound obtained by introducing a strongly hydrophillic group into a fatty acid having at least 6 C atoms, the said compound containing at least one double linkage which has been subjected to elaidinization.

DETERGENT. Brit. 488,196. Walter P. Williams to Procter and Gamble Co. A detergent in bar or tablet form, substantially free from soap, containing predominantly a mixture of more than five per cent glycerin or glycol partially esterified with a saturated fatty acid containing twelve or more carbon atoms, and less than ninety-five per cent. of a solid water-soluble salt of a sulphuric reation product of an aliphatic organic compound containing eight or more carbon atoms in the alkyl radical and characterized by its ability to dissolve in water quickly to an amount ample to accomplish its purpose as a detergent in cleansing operations, by its ability to resist precipitation when added to hard water in concentrations ordinarily employed in cleansing operations, and by detergent and lathering properties of sufficient magnitude that efficient cleansing is effected when it is employed in the ordinary way.

WETTING AND CLEANSING AGENTS. Brit. 489,097. Walter P. Williams to Procter and Gamble Co. Process of improving the lathering and detergent properties of a detergent containing as the essential ingredient water-soluble salts of alkyl sulphuric acids containing eight to eighteen carbon atoms in the alkyl radical and retaining in unsulphated form a known percentage of the alcohols from which said salts are prepared, which comprises adjusting the unsulphated alcohol content, adding or subtracting to an amount which will improve said properties but which is not in excess of 75 parts unsulphated alcohol to 100 parts of said water-soluble salt, the unsulphated alcohol used when the adjustment is by addition being either a primary saturated aliphatic alcohol containing eight to fourteen carbon atoms in the molecule or a secondary saturated aliphatic alcohol containing eight to twenty-five carbon atoms in the molecule of mixtures of the same.