period of approximately 3 wks.) does not cause an accumulation of addnl. amts. of "fat" in the livers of young male rats fed a basal diet which produces fatty liver. Dimethyl sulfide, dimethyl disulfide, S-methylisothiourea, and methylxanthogenate all exert a lipotropic effect when administered intraperitoneally to young male rats on a basal diet which produces fatty livers.

Abstracts

Soaps

Edited by
ARMOUR AUXILIARIES LIBRARY

SODIUM ALCOHOL SULFATES—PROPERTIES INVOLVING SURFACE ACTIVITY. E. E. Dreger, G. I. Keim, G. D. Miles, Leo Shedlovsky, and John Ross. *Ind. Eng. Chem. 37*, 610-17 (1944). The preparation and properties are described for alternate members of a homologous and of an isomeric series of purified sodium salts of secondary alcohol sulfates, containing from 11 to 19 carbon atoms, and for a straight hydrocarbon chain with the sulfate group in various positions. The purified sodium salts of the primary alcohol sulfates with 10, 12, 14, and 16 carbon atoms are also examined. Measurements have been made of the surface tension and foaming, wetting, and detersive properties of solutions of these compounds in water and with added electrolytes. Solubilities of sodium salts of the secondary and primary alcohol sulfates studied are reported at 5° intervals from 20° to 40° C. The data are discussed from the point of view of correlating changes in the properties involving surface activity when the structure and molecular weight of the compound are changed.

SYNTHETIC WASHING AGENTS. C. H. Keymer Jones. *Soap, Perfumery & Cosmetics 17*, 419-20 (1944). Soap has two weaknesses: sensitivity to acids and low resistance to the hardness-forming elements of water. Soap substitutes have attempted to overcome these faults. Turkey red oil was the first substance to improve upon soap. This was due to the introduction of SO_3H into the fatty acid molecule, making a fatty sulphuric acid ester. True fatty sulphonic acids were the next improvement having a protective colloid action on lime soaps. Further progress was made by the introduction into the fatty molecule of an aromatic hydrocarbon of the simple or polynuclear type, to which the SO_3H group was again attached for solubilizing purposes. The fatty acids were also converted to long chain alcohols with the SO_3H at the end. Other synthetics were made by blocking the sensitive COOH group with an aliphatic residue and attaching the solubilizing group on to this. In some cases the fatty acid is esterified with an aliphatic hydroxy-sulphonic acid, in others by an aminosulphonic acid. These are probably the most important synthetics produced. They are superior to soap in regard to wetting power, and superior to the sulphonated alcohols in that their lime salts are easy to dissolve in water. The latest class of synthetic washing agents is a fatty condensation product in which the solubilizing component introduced is not the SO_3H group but decomposition products of the proteins, consisting chiefly of amino-acids.

SOAP IN MEDICINE. Milton A. Lesser. *Soap 20*, No. 7, 29-32, 74 (1944). A review is given of the medicinal uses of soap based on its virtues as a detergent and its ability to lower surface tension efficiently. Among the many uses listed are: use of soap in inactivating the virus of epidemic influenza, soap as a means of preventing hydrophobia resulting from rabid dogs, role of soap in presurgical scrubbing, soap in the dressing of wounds and in first aid work. Tests have shown that in addition to esthetic reasons, cleanliness is important for the efficient functioning of the disinfecting power of the skin, and in the prevention of industrial dermatoses and infection.

WETTING AGENTS. *Chem. & Met. Eng. 51*, No. 7, 137 (1944). Several types of wetting agents and detergents, called Tritons, have useful application in compounding rubber latices and in the textile and leather industries. Triton 770, an aqueous solution containing 20 percent of an aralkyl ether sulphate, is stable in neutral and alkaline solutions even when heated, and in acid solutions, unless heated at a pH below 3.5. It will emulsify oils and greases and suspend solid particles. Although Triton 770 foams readily, it does not form a heavy lather and can be used in many places where ordinary soap cannot. Its spreading properties are reported to be good. Tests showed marked lowering of surface and interfacial tension. Triton K-60, an aqueous dispersion of a quaternary ammonium salt, is supplied as a paste at 25 percent solids. A cation-active compound, it is stable in solutions of strong acids and is not precipitate in hard water or by water-proofing agents. It retains its activity in concentrated acids and salts.

MEMBRANE AND POROUS STONE FILTERS AS IMPORTANT AIDS FOR THE DETERMINATION OF FAT ACIDS IN FILLED SOAPS. H. Ankerst. *Fette u. Seifen 50*, 354-6 (1943). Quant. and more rapid removal of fillers in filled soaps when detg. their fat acid content is obtained when a membrane or porous stone filter is used. Soaps contg. 7% or less of fillers can be dissolved and filtered directly. More highly filled soaps should be split out before sepg. the fillers from the ether-extd. fat acid and solvent. These recommendations are based on expts. The time required is about half that of the method with paper as the filter medium. The app. is described in 2 diagrams showing the use of both the membrane and porous stone filters. *(Chem. Abs.)*

BORON BODIES IN SOAP. *Perfumery & Essential Oil Record 35*, 172-3 (1944). A new detergent composition includes a water-soluble ionizable anionic active surface-active compound stable in alkaline solution and a material containing sodium oxide and boron trioxide in the proportion of one to three mols of Na_2O to one mol of B_2O_3. Good results in detergency are obtained when the material as made is dried to a moisture content not substantially above 50 per cent. Tests made on the borated soap showed that the borate material will stand more unfavorable conditions of use without losing its effectiveness than will any other known soap builder. Several ways of preparing the detergent are described.