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316–9 (1969). The synthesis of long chain alkanediols through addition of butanediol-(1,4), hexanediol-(1,6) and ethanediol-(1,2) to long chain alpha olefins is discussed. Reaction of the alkanediols obtained with ethylene oxide produces nonionic surfactants whose physical and applicational properties are illustrated, using hexadecane-1,4-diolpolyglycol ether as an example.

TWO-PHASE TITRATION OF SOAP IN DETERGENTS. M. Bares (Inst. of Chem. Tech., Prague, Czechoslovakia). *Tenside* **6**, 312–6 (1969). A new method is described for the determination of alkali soap and non-soap anionic surfactants in detergents. The method is based on a two-phase titration in an alkaline water/n-propanol medium, in which the indicator is bromocresol green and the cationic titrant is α-ethoxy pentadecyltrimethyl ammonium bromide (Septonex). The method, which has an accuracy of 1.5% (relative), has wide application for detergents containing not only soap but other anionic surfactants as well.

INVESTIGATIONS INTO THE DEGREASING AND SORPTION CAPACITIES OF SODIUM N-ALKYL SULFATES. K. Schwabe, K. Schaurich and G. Wasow (German Acad. of Sci., Berlin, Germany). *Tenside* **6**, 261–6 (1969). Examination of the degreasing and sorption capacities of sodium n-alkyl sulfates show that satisfactory effectiveness is essentially limited to a narrow length of alkyl chain range, between 14 and 16 C atoms. High electrolyte concentrations reduce surfactant adsorption on the substrate, and, as an empirical observation, can lead to an increased greying of the washed fabrics. The easily obtained secondary alkyl sulfates have only a small, though measurable, degreasing effect.

DEPOSITION AND REDEPOSITION; METHOD FOR THE DETERMINATION OF SOIL CARRYING POWER OF WASHING LIQUORS. G. Jakobi (Henkel & Cie., Düsseldorf, Germany). *Tenside* **6**, 307–11 (1969). The soil carrying power of various fabric greyness inhibitors, such as carboxymethyl cellulose, polyvinyl pyrrolidone and polyvinyl alcohol was examined, using cotton and synthetic fibers. Of the two test methods used, it was found that the redeposition method (in which soiled fabrics were washed in the presence of clean fabrics) was better suited to determine soil carrying power than the deposition method (in which clean fabrics were washed in a liquor containing suspended soil).

AMPHOTERIC SURFACTANTS OBTAINED BY ALKYLATION WITH 1,2-GLYCOL SULFITE. H. Distler and R. Widder (B.A.S.F. AG, Ludwigshafen, Germany). *Tenside* **6**, 241–7 (1969). The preparation, properties and reaction possibilities of 1,2-glycol sulfite are discussed, with special reference to the alkylation of long chain amido or ester amines with 1,2-glycol sulfite, resulting in the formation of new surfactants with a sulfitobetaine structure. The applicational properties of these surfactants, e.g. wetting, foaming, detergency, microbiocidal effectiveness and their use as a finishing and laundry finishing agent are also discussed.

PRACTICAL COST/PERFORMANCE CONSIDERATIONS FOR INSTITUTIONAL LAUNDRY BLEACHES. R. R. Keast and E. S. Roth (FMC Corp.). *Soap Chem. Specialties* **45**(9), 50–6, 86–90 (1969). The results of practical washing tests conducted in a diaper-rental laundry show that the use of NaDCC (sodium dichloro isocyanurate) instead of TCCA (trichloroisocyanuric acid) would greatly increase storage stability, increase safety on both colored and white fabrics and eliminate corrosion of stainless steel dispensing equipment. Furthermore, NaDCC is more economical to use and bleaches more effectively than either TCCA or liquid bleach. NaDCC appears singularly suited to supplant liquid chlorine bleach as the commercial laundry industry standard.

DETERGENT COMPOSITIONS CONTAINING PARTICLE DEPOSITION ENHANCING AGENTS. J. J. Parran, Jr. (Procter & Gamble Co.). *U.S. 3,489,686.* Detergent compositions are claimed, containing water-insoluble particulate substances, such as antimicrobial agents, and certain polyethylenimine or alkoxylated polyethylenimine polymers which serve to enhance the deposition and retention of such particulate substances on surfaces washed with the detergent composition.

DEHYDRATION OF AMINE OXIDES. J. T. Inamorato and G. F. Marion (Colgate-Palmolive Co.). *U.S. 3,489,687.* A process for the dehydration of an aqueous solution of a thermally sensitive surface-active higher alkyl (C_{10}-C_{20}), lower dialkyl (C_1-C_3) amine oxide comprises mixing the aqueous solution with a solid, hydratable inorganic salt, such as sodium sulfate, in an amount sufficient to react with substantially all the water in the solution. The hydration reaction product is obtained as a friable mass which can be easily granulated to form an effective free-flowing built detergent composition.

CHLORINE STABLE MACHINE DISHWASHING COMPOSITION. H. E. Crotty and C. A. Brungs (W. R. Grace & Co.). *U.S. 3,491,028.* A chlorine stable machine dishwashing composition is disclosed, consisting of an inorganic alkaline material in major amount and a chlorinating agent chosen from the group consisting of lithium hypochlorite and a mixture of lithium hypochlorite and sodium or potassium dichlorocyanurate.

SOLID STORABLE AND NON-FOAMING BOTTLE CLEANSING AGENTS. H. Kasperl, G. Tischbirek and K. H. Worms (Henkel & Cie., Gmbh). *U.S. 3,491,029.* A substantially non-foaming and storable bottle cleansing agent contains 50–95% caustic alkali of a grain size smaller than 3 mm and 0.5–3.5% of a propylene oxide adduct of an aliphatic polyalcohol having at least four hydroxyl groups and a cloud point of 10–50C. The balance of the compound is made up of ortho- or polyphosphates, soda, potash, gluconates, sodium silicate and fillers.

ALKALI METAL ALKYLARYL SULFONATE COMPOSITIONS. R. R. Fields (Union Carbide Corp.). *U.S. 3,491,030.* Non-caking detergent compositions consist of an admixture of an alkali metal lower alkyl naphthalene sulfonate and a biodegradable normal alkyl benzene sulfonate. The naphthalene compound functions as an anti-caking agent for the normal alkyl benzene sulfonate.

LIGHT COLORED SULFONATION PRODUCTS. H. Baumann and W. Stein (Henkel & Sie., GmbH). *U.S. 3,492,239.* A process for preparing surface active sulfonates comprises reacting a C_8-C_{22} olefin with either chlorosulfonic acid or gaseous sulfur trioxide