

Abstracts

BIODEGRADABILITY OF ANIONIC/CATIONIC SURFACTANT COMPLEXES UNDER THE AEROBIC AND ANAEROBIC CONDITIONS OF EFFLUENT AND SLUDGE TREATMENT. W. Janicke and G. Hilge. *Tenside Deterg.* 16(3), 117-22 (1979). The biodegradation of anionic/cationic surfactant complexes from straight-chain alkyl benzene sulfonate (ABS, LAS) and quaternary ammonium salts (dialkyl dimethyl ammonium chloride DDAC and alkyl dimethylbenzyl ammonium chloride ADBAC was examined in long-term laboratory tests under aerobic (activated sludge method) and anaerobic (decaying sludge method) conditions. The degrees of degradation of the ABS/DDAC complex in the activated sludge test amounted to about 95-97% under these conditions, for both separate surfactants. For the ABS/ADBAC complex, the corresponding degrees of degradation amounted to 97% for both surfactant components.

TESTING AND ASSESSMENT OF DETERGENTS. H. Milster, U. Sommer and L. Meckel. *Tenside Deterg.* 16(3), 130-4 (1979). Selected examples taken from numerous detergent tests are used to demonstrate the factors which have a significant influence on the result. It is particularly important to take into consideration the structure of the chosen laundering program, the amount of detergent used in relation to the hardness of the water, and the number of laundering cycles carried out. Investigated was the change in degree of whiteness on unsoiled test fabrics such as Turkish toweling, after numerous launderings, as a means of assessing detergents.

THE EFFECT OF LONG-CHAIN ALKANES ON THE STABILITY OF OIL-IN-WATER EMULSIONS. THE SIGNIFICANCE OF OSTWALD RIPENING. R. Buseall, et al. *Colloid Polym. Sci.* 257(6), 636-44 (1979). Investigations have shown that o/w emulsions made from or containing small quantities of long-chain alkanes are more stable than those made from short-chain alkanes or other simple oils. Two principle explanations for this behavior have been suggested, one stating that the long-chain component inhibits Ostwald ripening, the other that it inhibits droplet coalescence. With the aid of adsorption, centrifuge and kinetic experiments it is shown that the effect probably arises from a slower rate of Ostwald ripening in emulsions containing long-chain alkanes.

ADSORPTION CHARACTERISTICS OF CERTAIN POLYOXYETHYLENE-POLYOXYPROPYLENE BLOCK CO-POLYMERS ON POLYSTYRENE LATEX. J.B. Kayes and D.A. Rawlins. *Colloid Polym. Sci.* 257(6), 622-89 (1979). The adsorption of a series of commercial polyoxyethylenepolyoxypropylene block polymers onto polystyrene latex has been studied. Adsorption was Langmuirian in all cases with maximum adsorption occurring after the apparent critical micelle concentration had been reached.

DETERMINATION OF IODINE VALUE OF SOME OILS FOR RESINS. Ravi Prakash, et al. *Paintindia* 26(3), 21-2 (1979). Degree of unsaturation measured using bromine monochloride to give a more rapid and convenient method of determination.

JOJOBA OIL. R.V. Joglekar. *Paintindia* 28(12), 26-31 (1978). This seed substitutes for sperm oil, which is now in short supply. The seeds contain 50% of a nonglyceride liquid wax. Physical and chemical properties are reviewed.

HYGIENIC REQUIREMENTS IN THE CLEANING AND DISINFECTION OF SOLID SURFACES. K. Bansemir. *Tenside Deterg.* 16(4), 193-7 (1979). The necessity of cleaning and disinfection is dependent not only on the nature of micro-organisms and the amounts present, but also on the constitution of the macro-organisms—namely man. Everybody is in a constant battle not only against his or her own germs, but those of others. In the home, normal cleaning is sufficient except in a few special cases such as infectious illness of a member of the family. Wherever many people congregate, prophylactic measures must be taken in order to prevent the transmission of germs. The success achieved with disinfection depends not only on concentration and the time of disinfection but also on the surface.

NOTES ON THE ABSENCE OF A LINK BETWEEN THE USE OF FABRIC CONDITIONERS AND DIAPER DERMATITIS. G.J. Schmitt. *Tenside Deterg.* 16(4), 226-8 (1979). Tests in dermatological laboratories on adults with healthy skins have proved the

harmlessness of fabric conditioners. Controlled clinical tests on about 3,000 babies, carried out by three international research groups working independently to ascertain the affinity of commercial fabric conditioners with the human skin, led to complete agreement of results. The parameter under test was diaper dermatitis. These tests for detergent-analogous side effects were carried out under conditions which would most likely lead to skin irritation, namely in the warm, damp environment of a baby's napkins.

HYGIENE AND THE LAUNDERING OF TEXTILE FABRICS. H. Bosenberg. *Tenside Deterg.* 16(4), 203-5 (1979). Textile fabrics are said to be hygienically perfect if they do not represent a health hazard, i.e. if they are clean and possess the necessary physiological properties, and all harmful influencing factors have been eliminated, whether live or inanimate. Whereas it is possible to eliminate inanimate deposits by proven laundering techniques, micro-organisms are more difficult to remove. There are only a few methods, often only of limited effectiveness, which will kill germs with sufficient reliability. Indicated are purely thermal processes as well as chemothermal laundering techniques.

DISINFECTANT DETERGENTS IN INDUSTRIAL LAUNDERING. H. Grund. *Tenside Deterg.* 16(4), 206-8 (1979). Currently, about a quarter of the dirty linen from hospitals and institutions are being laundered in industrial laundries. It is a known fact that many authors regard all hospital linen as infectious. Industrial laundries dealing with hospital linen must comply with stringent requirements which are listed in official guidelines. One of the important requirements is the disinfectant laundering of hospital linen with officially approved detergents and methods.

THE COMPATIBILITY OF OPTICAL BRIGHTENERS WITH CHLORINE-GENERATING SUBSTANCES IN DISINFECTANT LAUNDERING PROCESSES. C. Eckhardt. *Tenside Deterg.* 16(4), 209-11 (1979). Hygienic requirements in industrial laundries can be fulfilled by using chlorine-generating substances, especially with hospital linen. These substances can be added at various stages of the laundering operation. The methods officially approved by the German Health Authorities make stringent demands on the optical brighteners contained in washing powders. Two cotton brighteners now on the market which are suitable for warm to hot laundering temperatures are the conventional dimorpholino-dianilino-triazinyl-diamino-stilben derivatives and a compound of the distyrylbiphenyl type.

ANALYSIS OF CONDENSATION PRODUCTS OF FATTY ACIDS OR THEIR METHYL ESTERS WITH AMINOETHYLETHANOLAMINE. G. Schwarz et al. *Fette, Seifen, Anstrichm.* 81(4), 154-8 (1979). Imidazoline derivatives, formed by the aforesaid condensation, react with sodium monochloroacetate to yield products having interesting properties, whose structures are now believed to be of the imidazolium-betaine type. This cannot be the case, since the latter would exhibit a UV-absorption that is not found in the commercial products. Therefore, the composition of the starting product, i.e., the imidazolines and their products of hydrolysis was investigated. For this purpose the quantitative oxidation of the hydroxyethylaminoethyl group with periodate for the direct determination of this secondary basic nitrogen was successfully used for this first time.

THE IMPORTANCE OF THE PHASE BEHAVIOR OF PHOSPHOLIPIDS FOR EMULSION STABILITY. L. Rudhag. *Fette, Seifen, Anstrichm.* 81(4), 168-73 (1979). The relationship between the phase behavior for different combinations of neutral and charged surface active lipids was investigated with regard to the dispersion and stabilization of emulsified systems. When the negatively charged lipids were combined with neutral phospholipids lamellar liquid crystalline phases were formed with large repeat-distances depending on the incorporation of water between the lipid bilayers. Studies of phase equilibria in a water-oil-phospholipid systems showed that the lamellar phase was present in that concentration area where the o/w emulsions investigated were produced. It was clear that both the degree of dispersion and the emulsion stability could be brought to optimum values by the addition to neutral phospholipids of negatively charged lipids or by selecting commercial lecithins in which a certain amount of negatively charged phospholipids were present.