P-8 Polymeric Antiprecipitant Systems for Household and Industrial Detergents

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Water-soluble, acrylic acid-based homo and copolymer have found increased usage as detergent additives. Their antiprecipitant activity is studied in several multicomponent builder systems and under a variety of simulated washing conditions. From these experiments some conclusions about the relationships of polymer structure to performance can be drawn. Particular emphasis is put into experiments involving key precipitating salts in the washing process. Some realistic washing data are also used to support the conclusions of the above beaker experiments.

P-9 LAB Production

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Linear alkylbenzene (LAB) is the most cost-effective active ingredient for detergency applications. Technology developed by UOP Inc. for the production of LAB has become the most successful and widely used processing route worldwide. In the UOP approach, normal paraffins are first separated from a kerosene fraction of the appropriate boiling range by using the UOP Molex process. Once normal paraffins have been separated, they are catalytically dehydrogenated to linear olefins of the same carbon number in a UOP Pacol catalytic dehydrogenation unit. The linear olefins are then alkylated with benzene in a UOP Detergent Alkylation unit. Separation of the olefins is not required prior to alkylation with benzene. This paper describes the commercial utilization of the UOP technology and discusses a number of recent process improvements.

P-10 Alkyl Polyglycoside Surfactants, Properties and Applications

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Alkyl polyglycosides are a new class of nonionic surfactant. They result from the condensation of cyclic polyhydric alcohol (starch) with fatty alcohol. They are highly water-soluble with no gel point or inverse cloud, yet exhibit surfactant properties similar to alcohol ethoxylates. Electrolyte tolerance, acid and caustic stability are three properties common to this class of molecule. In addition to excellent detergency properties, alkyl polyglycosides are stable foamers, good lime soap dispersents, mild and biodegradable.

P-11 Liquid Laundry Detergents Containing Proteinases

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Tukovy Prumysi kocern, Vyzkumny Ustav, Pracoviste Pro Detergenty, Rakovnik, Svermova 1998 - PSC 269 01, Czechoslovakia

The application of alkaline proteinases in liquid laundry detergents is very attractive because they are a very effective component in lower temperature washing. The detergents with their composition were up to now based on the washing ability of the enzymes, while the formulation basis had only a low efficiency. At the Fat Industry Research Institute much time has been devoted to the development of enzymatic liquid detergents. The stability tests of the raw materials used in the detergents indicated a limited choice of compounds that influence the enzyme stability in acceptable limits. The choice was further conditioned by the claim of high solubility and washing performance. On the basis of these criteria many formulations were prepared in which homogeneity, washing ability of the base and stability of added enzymes as a function of added stabilizers were followed. The chosen types were then compared with the effect of powder detergents.