

The background of the slide features a warm orange gradient. Scattered across this background are several silhouettes of butterflies in various sizes and orientations, some appearing as light orange and others as a slightly darker shade.

How to Manufacture Disinfectants, Soaps and Detergents

Introduction

Soaps and detergents are used frequently in our daily life. We use them to wash our hands and clean our clothes without ever really paying attention to how they work. Beneath the plain white surface of a bar of soap lies an intriguing history and a powerful chemistry. It has been said that amount of soap and detergent consumed in a country is a reliable measure of its civilizations. There was a time when these products were luxury; now it is a necessity. A disinfectant or agent that frees from infection is ordinarily a chemical agent which kills disease germs or other harmful microorganisms and is applied to inanimate objects.

The specific way in which a disinfectant agent is used is dependent on both the desired objective and the infectious agent present. The term detergent by itself refers specifically to laundry detergent or dish detergent, as opposed to hand soap or other types of cleaning agents. Detergents are commonly available as powders or concentrated solutions. Detergents work because they are amphiphilic partly hydrophilic (polar) and partly hydrophobic (non polar). Their dual nature facilitates the mixture of hydrophobic compounds (like oil and grease) with water. Because air is not hydrophilic, detergents are also foaming agents to varying degrees. Completely non polar solvents known as degreasers can also remove hydrophobic contaminants but may not dissolve in water because of a lack of polar elements.

Soaps are mainly used as surfactants for washing, bathing, and cleaning, but they are also used in textile spinning and are important components of lubricants. Soap is a mixture of sodium salts of various naturally occurring fatty acids. Soaps and detergents are very similar in their chemical properties. However, there is a significant difference between them; soaps are produced from natural products, and detergents are synthetic, or manmade. The market is expected to grow at rates ranging from under 4% to around 4.5%. These are very modest rates considering that the lifestyles not only of urbanites, but even of well off rural folks are changing at a very high pace. The analysts are expecting the industry to continue to grow in both the industrialized as well as developing nations.

Soap is a product for many people and the lathering up can be a treasured part of a morning or nightly routine. Whether it might be scented or unscented, in bars, gels, and liquids, soap is a part of our daily lives. The market is growing at 7% a year. This means that the incremental demand generation is 5% over and above the population growth. With increasing awareness of hygienic standards, the market for the Soaps could grow at a rate higher than 8% annually. Interestingly, 60% of the market is now sourced from rural sector. This means that the variance between the two segments is not very large. Since upper-end market focus is the urban areas, margins come from the urban sector.

A detergent is a surfactant or a mixture of surfactants with "cleaning properties in dilute solutions. Detergents, as a constituent of the overall FMCG industry, accounts for a near 12% of the total demand for all FMCG products estimated at over Rs. 530 bn. Detergents, chemically known as alfa olefin sulphonates (AOS) are used as fabric brightening agent, anti-deposition agent, stain remover and as a bleacher. A major input for the production of detergents is a petrochemical, Linear Alkyl Benzene (LAB), while soaps rely more on an inorganic chemical, caustic soda, as a major input.

To cater to this increasing demand of quality washing powders most of the top detergent brands in India are continually introducing better packaged detergents that are offering a host of benefits in a single wash. In India HUL holds a 38 per cent market share in the washing powder segment clearly standing as the winner. The other important players in the detergent industry include Surf Excel, Nirma and Sunlight.

Disinfectants market has grown in value terms to an estimated Rs. 6 bn a year, if multi-purpose detergents are excluded. In volume terms, the market is of the order of around 9600 tpa of which more than 60% is represented by phenyls. The branded MNC-oriented market is placed at over Rs. 2750 mn and is growing at about 20%.

Growing healthcare expenditure will aid the growth of the surface disinfectants market. Healthcare expenditure constitutes a significant part of the development budget of all countries. It consists of spending by both public and private sources on medical goods and services. Rapid economic development across the globe is expected to improve access to quality healthcare. Increasing healthcare expenditure will lead to a rise in the demand for quality healthcare and will be an important growth driver for the surface disinfectants market.

Some of the fundamentals of the book are technology of soap making, washing of saponified soap, plant for total soap making operation, construction materials for soap making plants, earth bleaching of oils, chemical bleaching, fatty acids, manufacture of framed soaps, manufacture of chips and flakes, manufacture of milled bars, the mazzoni process, floating soap bars, mixing of soap, chemicals used in soaps & detergents, alkylolamides, alkylolamides in shampoo formulations, chemistry of the alkylolamides, mono alkylolamides, di alkylolamides, pure dialkylolamides, phosphoxylated alkylolamides, sulphated alkylolamides, disinfectants and antiseptics, dry cleaning agents, etc.

The present book contains formulae, processes of different types of soaps, detergents and disinfectants. These products have good demand in domestic as well as in International market. So there is a very good scope for new entrepreneurs to venture into this field.

This book is an invaluable resource for entrepreneurs, technocrats and for those who want to diversify in to this field.

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