

Detergent Trends of Tomorrow

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Three decades ago, an innovation would have a life cycle of up to 5 or 10 years. Today, this is not so. Every change is replaced by alternative technologies within a short period. The reasons for this are many. In this issue, we examine the actual and calculated conditions that might occur with the help of surveys, valuable forecasts and try identifying detergent trends of the future. The world population is increasing dramatically when compared to earlier times. UNESCO forecasts that the number of inhabitants will reach 10 billion by the year 2050. This effectively means that the world population will almost double in 50 years in the new millennium. India and China will contribute largely to this phenomenal population growth. Nature has endowed all mammals the same basic supply of heart beats. Humans use their energy more effectively, utilise lesser strength for propagation and survival than other primates, thus growing older and older. The human race not only reaps sweeter fruits of life, but also enjoy them the most and for a larger period. Medical care, economic independence, shorter working hours are other reasons in the longer life expectancy of humans.

Disposable incomes in almost all countries are increasing. More and more money is available for purchase of consumer goods. Per capita income and affluence is on the rise all over the globe. Carrying out a market assessment on detergent products, we find that in the last 10 years product forms have changed to become more compact and user-friendly. Compact and heavy-duty products are slowly replacing conventional spray-dried detergent powders. Heavy-duty detergents traditionally were available in form of powders, bars/cakes. They are now available in various forms like powder, bars/cakes, liquid, pearls, tablets, granules, etc. Today even liquid heavy-duty detergents are facing strong competition from detergent powder gels, formulated for a variety of temperatures, soils, and textile substrate. Speciality detergents comprising of products specially formulated for a distinct temperature range and textile substrate like, silk, wool, special synthetic textiles will only increase in days to come.

Higher disposable income and affluence has increased usage of washing machines in urban India. Most washing machines are programmed today to end with a softener rinse cycle. Cationic surfactants used in fabric softeners adhere to the textile fibres to give laundry a soft feel on touch, along with other attributes, namely a special fragrance. Compact detergents products introduced in early 1990's have led to the shift in the market. Liquid detergents will slowly capture a larger market share. Interest in speciality detergents will increase. Manual dishwashing agents will become increasingly concentrated. It will eventually be replaced by clear

rinses for dishwashing machines. Fabric softeners will become popular in Indian washrooms. Growth will take place mainly in price aggressive market segments. Over-priced and poor quality regional products will suffer and will be inevitably supplanted by quality global products.

Surfactant content in detergent products all over the world has increased in the last ten years. Anionic surfactants, alkyl benzene sulphonates and secondary alkane sulphate will slightly decrease in total surfactant levels in individual products. Nonionic surfactants, in view of its superior benefits, will see a considerable increase in usage in detergent formulations. Increasingly cationic surfactants will, find usage in fabric conditioners. Amphoteric surfactant usage will see an increased tendency.

Globalisation will bring about changes in the market, worldwide. Licensing, joint ventures, strategic alliances, mergers of smaller units to larger conglomerate will lead to

- * Brands becoming standardised
- * More systematic introduction of products in the market
- * Ingredients of similar quality are available everywhere in the world
- * Technological leadership in any product form or market segment will be possible only for a limited period
- * Large detergent companies will expand further, like those happening in other markets like pharmaceuticals, automobiles, heavy engineering equipment's, etc

Related trends in the market will also influence the detergent trends. Personal computers have now replaced teddy bears and Barbie dolls in children bedrooms and schools. Using fountain pens and even writing are slowly becoming relics of the past. Usage of Mobile telephones is on the rise. Love letters are chatted from Internet cafes directly into individual computers or sent in a short form via E-mail. People can also access information about daily chores like washing and cleaning of laundry. They will naturally get sufficient opportunity to order detergent goods from super market via, E-mail. E - mails has now become a youth cult. Use of graphic artists is no longer necessary to make charts and maps. Exotic pictures of planet Saturn and Mars that were once difficult to get hold off are now available for kids who have mastered the computer. Virtual realities will replace product tests. Advances in biophysics and sensors will help rabbits not to shed tears in future. Hairless albino mice will not have to suffer baths any longer as part of product testing.

Fast food craze now prevalent has no need for dishwashing agents. It will in no way reduce slow food consumption on

food plates, with tumblers and glasses on a lace table cloth. Functional food, where colourful vitamins and other health improving additives, supposedly increasing nutritive value drastically will be the food of the future. In this scenario, manufacturers of washing and dishwashing agents will prosper and have a field day.

Unemployment will continue to be a major problem worldwide and will become acute in India. It will be intensified further with more and more women looking out for jobs, unhappy with just being a homemaker. Employment ratio of women will increase by 50 to 75%. With the level of education greatly improving, demand for qualified and quality work will increase finally leading to assertion of individuality. Joint family will break up with increasingly single-family set-ups. The proliferation of media, cable and satellite television will reduce the disparity between rural and urban tastes. Growing mobility will also contribute to lifting of custom barriers. Free movement of people from one part of the country to another will increase, leading them to act more globally. Nuclear family set up with both husband and wife working will become increasingly common. The detergent industry greatly benefits from this arrangement.

- * As both partners have an occupation, convenience products such as washing machine powders, tablets and cleaning gels will be popular.
- * Educated partners will be open to innovation and will be less thrifty shoppers.
- * They will be more frequent users of heavy-duty detergents.
- * Normally nuclear family household requires more washing agents and so will spend more per wash cycle than joint family household.
- * Trademarks would gain more acceptances with consumers threatening classical detergents and unbranded products.
- * Desire for global or uniform formulation by consumers will lead to standardisation of detergent products.

Consumer behaviour will have a great bearing on detergent trend. The consumer will become less calculable more changeable and react impulsively to situations. The prestige of the product will depend largely on the quality, product form, material, price, performance, and value for money feels and true and just information furnished about the product. Long delivery times and delayed supply will not be accepted as a norm. Departmental stores and supermarkets will have to rearrange so that the decision to buy the product on the spot is not only simpler but also actively promoted. Due to increase in television channels, advertising spots will find fewer acceptances and promote frequent channel surfing during television advertisements. Advertisers will then have to find a new place to attract consumers. The purchase place will become more important than the goods purchased there.

People have become more fashion conscious. High tech textile materials provide freedom of movement for work and for fun. There will be only three types of clothing occasions. Work, leisure / sports and parties. Textile outfits for sporting activity will be made with an idea to make every movement comfortable. Every drop of sweat will be transported to the outer part of the clothing by newer high tech textile materials. Body perspiration and grease would be easily detectable for easier removal. Use of cotton synthetic blends, with their advantage of being lightweight; warmth retentive and faster moisture transportation will increase followed by cotton and wool respectively.

More than two-thirds of earth are covered by water. However, 97% of water supplies are undrinkable salt-water oceans. Thus, water is an important economic commodity to be sparingly used. All innovative products introduced will have to consider this factor. New improved washing machine technology with lower water consumption per wash cycle, computerised washing machines with controlled washing process, detergent dosage will be the need. The co-operation between detergent manufacturers and washing machine makers will become closer. Machine manufacture will provide with detailed environmentally relevant data, such as electrical energy consumption, water consumption, washing, and spinning performance, etc. Detergent manufactures will have to produce machine specific cleaning agents.

Washing capability of any detergent depends, on the following six W's of washing process.

- * Water
- * Waves (Mechanical energy)
- * Warmth (Heat energy)
- * Washing agent (Detergent Formula)
- * Wash Substrate (Textile type)
- * Wash Soils

Detergent manufacturers will have to formulate detergents conforming to specifications that will optimise the various attributes according to the above parameters. Increasing competition among detergent manufacturers will force product manufacturers to differentiate their products so that each product stand out from another in such a manner that they are considered for purchase by consumers. Apart from quality and price, the so-called value for money concept will dominate in purchase decisions. Additional aspects like laundry care, colour protection, fibre safety, antimicrobial dishwashing agents, and product that leave their shine will be associated with detergent products.

Increasing awareness about health and body guarding and protecting against possible allergies, and infections will become important. Formulations have to minimise skin sensitivity or

allergy by judicious selection of ingredients in products as it will become a very necessary requirement. Use of fragrances, preservatives, and enzymes, other disinfecting additives will become strictly controlled for use in product formulations.

Products will be differentiated on the basis of the surfactants and additives used for manufacture. Oleochemicals base surfactants and actives sourced from natural origin will be preferred over surfactants and additives based on petrochemicals. This will be important in products that come in direct contact with human skin. Every manufacturer likes to improve his profits putting in minimum efforts. It can be either by reducing production costs or by logistics savings. It is imperative that in future every manufacturer of detergents will have to launch products to improve convenience and comfort of consumers and use ecologically unobjectionable and biodegradable raw materials in order to survive competition in the market.

Manufacturer proximity to the consumers will be an important determinant to be successful in the market. The processor should be able to recognise the need of the consumer at a very early stage and come up with a solution. The supplier will cease to be a mere deliverer of goods. He will be a concept provider and a joint partner grappling with problems faced by the manufacturer. The products supplied should have the same high standard in service, quality technology, etc and should meet international specifications and standards. Basic research and development that are time consuming and

expensive have to be optimised by joint co-operation between supplier and manufacturer with a view to reduce time and costs. Every potential supplier of products will offer only tested products that are ecologically, toxicologically and dermatological safe to rule out harmful effects possible in its use. Moreover, the products will have to meet all legal and governmental requirements that will become increasingly stringent over time.

Predicting the future is no doubt very difficult task. However, ideas that seem improbable at the beginning may sometimes finally lead to change in the trends. Just for thought, how about a detergent to clean your garments without using water, or a dishwashing liquid that dissolves the burnt food residue in your "Kadai", that now have to be removed by scrubbing. Soaps and detergents that repel mosquitoes from biting you or say attract the opposite sex but keeps the stray dogs away. The list can be endless.

It is also quite possible that in future, detergent will not be used at all. Physical Ultrasonic cleaning will be popular. Fabrics will be designed to resist soil stains. Naturally, it will require no washing. The chances of innovative creation are many. It is for all of us to take it as our mission and bring these concepts into reality to enable all humanity lead a better quality of life.