New Era in Preservatives – SabiLize®- New

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Abstract

Natural preservatives are the chemical agents derived from plants, animals, microbes and their metabolites that prevent the decomposition of products by any means. The modes of action of these natural preservatives are the inhibition of microbial growth, oxidation and certain enzymatic reactions, which can occur in the formulations.

SabiLize®- New is a classic example of a natural preservative for cosmetic formulations from our company, with proven preservative efficacy better than parabens, which are the most widely used preservatives in cosmetics, pharmaceutical and industrial products.

Introduction

Preservatives are a group of chemicals used to prevent the growth and proliferation of microorganisms in cosmetic and personal care products which would otherwise cause spoilage or contamination of the finished product. The use of preservatives is nothing new to every industry globally and most consumers would be amazed at the level of preservative used in common domestic and industrial materials, such as coatings, cooling water, detergents, food, fuel, glues, leather, paper, textiles, wood, electronics, plastics, tiles and even NASA space suits. In fact, without the use of preservatives in all these materials, proliferation of microorganisms would lead to spoilage and safety concerns.

Need for Preservatives

There are two main reasons for preserving cosmetic and personal care products i.e. health hazards and product spoilage. Most cosmetic and personal care products present an ideal environment for microorganisms to grow and multiply quite easily. All the vital components such as temperature, nutrients, pH and water are present in cosmetic products, which make contamination highly likely if preservatives are not used.

Some microorganisms are pathogenic (harmful to humans) and, if allowed to contaminate and proliferate in cosmetics and personal care products, might cause severe harm to the end user. Another safety concern with regard to contamination is that the toxins released by these microorganisms can also be harmful to humans.

Cosmetics are commonly contaminated by four types of microorganisms: gram negative, gram positive, yeast and fungi. The CDC (Centre for Disease Control) has had numerous reported incidences where cosmetic product contamination has been blamed for health hazards. One organism commonly found in contaminated cosmetic products is *Staphylococcus aureus*. It is a bacterium frequently found living on the skin and in the nose of healthy individuals. In compromised patients it can cause illnesses ranging from minor skin infections (such as pimples, boils, cellulotis) and abscesses to life threatening diseases such as pneumonia, meningitis and septicaemia.

In some cases *S. aureus* has become resistant to commonly used antibiotics. It can be argued that in nearly 99% of these cases, the contamination is likely to come from poor hygiene and not cosmetic products but nevertheless no supplier or manufacturer will be confident putting a product into the market place that could potentially be contaminated by *S. aureus*. Although very few incidents like these occur today, care still needs to be taken when formulating to ensure that formulations are adequately preserved.

The second reason for preserving cosmetic products is to avoid product spoilage. When microorganisms proliferate in, for instance, a cream, they break down the emulsion causing thinning, separation, pH changes, malodour, colour change, etc which means that the product not only looks and smells different but also may not function properly when used. Creams usually contaminated with moulds go black/grey on the surface and although some of these moulds are not harmful, they can be off-putting to the customer.

Nearly 50% of all recalls and withdrawals are due to the fact that products have become contaminated by microorganisms.