

SLS

Information circulating around the Internet has raised questions about the safety of SLS (Sodium Lauryl Sulfate). The Cosmetic Ingredient Review (CIR) has fully assessed the safety of this ingredient and found it to be safe. CIR is an independent organization established to thoroughly review and assess the safety of ingredients used in cosmetics in an open, unbiased and expert manner, and to publish the results in the open scientific literature. CIR has established a seven-member Expert Panel comprised of individuals expert in dermatology, pharmacology, chemistry, and toxicology - these independent scientists and physicians perform the reviews.

This information that is circulating also has used SLS as a synonym for Sodium Laureth Sulfate. This is incorrect as well. SLS actually stands for Sodium Lauryl Sulfate, which a different chemical.

The following information is provided from the Cosmetic Ingredient Review safety assessments of both Sodium Laureth Sulfate and SLS (Sodium Lauryl Sulfate).

Sodium Laureth Sulfate and Ammonium Laureth Sulfate

Discussion

Sodium Laureth Sulfate and Ammonium Laureth Sulfate are cosmetic detergents that exert emulsifying action, thereby removing oil and soil from the hair and skin. The Panel wishes to point out that these two ingredients produce eye and/or skin irritation in experimental animals and in some human test subjects; irritation may occur in some users of cosmetic formulations containing the ingredients under consideration. The irritant effects are similar to those produced by other detergents, and the severity of the irritation appears to increase directly with concentration. However, Sodium and Ammonium Laureth Sulfate have not evoked adverse responses in any other toxicologic testing.

Conclusion

It is recognized that Sodium and Ammonium Laureth Sulfate may induce eye and skin irritation. However, on the basis of the available information, the Panel concludes that Sodium Laureth Sulfate and Ammonium Laureth Sulfate are safe as presently used in cosmetic products.

Sodium Lauryl Sulfate (SLS) and Ammonium Lauryl Sulfate

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Discussion

Sodium Lauryl Sulfate and Ammonium Lauryl Sulfate are irritants in patch testing at concentrations of 2 percent and greater, and that irritation increases with ingredient concentration. In some cosmetic formulations, however, that irritant property is attenuated. The longer these ingredients stay in contact with the skin, the greater the likelihood of irritation, which may or may not be evident to the user.

Although Sodium Lauryl Sulfate is not carcinogenic in experimental animals, it has been shown that it causes severe epidermal changes to the area of the skin of mice to which it was applied. This study indicates a need for tumor-enhancing activity assays.

Auto radiographic studies of rat skin treated with radio-labeled Sodium Lauryl Sulfate found heavy deposition of the detergent on the skin surface and in the hair follicles; damage to the hair follicle could result from such deposition. Further, it has been reported that 1 percent and 5 percent Sodium Lauryl Sulfate produced significant number of comedones when applied to the pinna of albino rabbits. These two problems - possible hair loss and comedone formation - along with proven irritancy, should be considered in the formulation of cosmetic products.

Sodium Lauryl Sulfate and Ammonium Lauryl Sulfate appear to pose less potential hazard when in products designed for brief, discontinuous use, following which they are thoroughly rinsed from the surface of the skin.

Conclusion

Sodium Lauryl Sulfate and Ammonium Lauryl Sulfate appear to be safe in formulations designed for discontinuous, brief use followed by thorough rinsing from the surface of the skin. In products intended for prolonged contact with skin, concentrations should not exceed 1 percent.