



Understanding Sulfates

Sodium Lauryl Sulfate (SLS) is a surfactant (foaming and cleansing agent) used in shampoos, toothpastes and liquid soaps.

SLS is made by joining sulfate and lauric acid, two substances which are both abundant throughout the body. It is a good solubilizing agent and is also used in acrylamide gel electrophoresis. "Laureth" indicates ethoxylation ("lauryl" on one side of the sulfate group, an ethyl ether on another).

You'll often find SLS or its derivatives even in "all natural" products. After all, SLS is derived from coconut, a natural source. So, some people consider it to be natural.

The Hype

In the late 1990s an email began making its way around that claimed that SLS causes cancer in laboratory studies using animals.

SLS (the same as sodium dodecyl sulfate) is routinely used to solubilize chemicals used in cancer experiments prior to injecting them into test animals. Somebody read the list of substances injected, and mistook the solubilizer for the active ingredient.

There are now dozens anti-SLS sites online. They repeat much of the same information. As you visit them, you'll find references to a claim, twenty-one years ago, about contamination by nitrosamines. Since the sulfate moiety is an oxidizing agent, any nitrogen-containing compound might react to produce a tiny amount of nitrates, which in turn might react with something else to produce a nitrosamine. Your body itself produces far more sulfate just from daily metabolism, and it also produces its own nitrates. The claim on some sites that lauryl sulfate reacts with formaldehyde to produce "nitrosating agents" cannot possibly be true, since neither compound contains a nitrogen atom.

Statement from the American Cancer Society

"Sodium lauryl sulfate (SLS) and its chemical cousin sodium laureth sulfate (SLES) are **not** known carcinogens. SLS and SLES are powerful surfactants (wetting agents) and detergents. They have industrial uses because they are detergents that exert emulsifying action, thereby removing oil and soil. There is no way of knowing where this Internet information comes from, but there are a variety of Web sites offering health and beauty products that are SLS-free."

According to David Emery and his Urban Legends website, "All these websites are maintained by 'independent distributors' for various multi-level marketing companies hawking natural personal care products. As a matter of fact, the majority of URLs returned in a standard Web search on the keywords 'sodium laureth sulfate' all point to versions of the same propaganda."

http://www.cancer.org/docroot/MED/content/MED_6_1x_Shampoo.asp?sitearea=MED

Like many Internet email myths it has taken on a life of its own and has shown how if something is repeated often enough, it can become accepted as indisputable truth by those who suddenly hear it from multiple "credible" sources.

The Facts

SLS, in its pure form, is a skin irritant. But, no one suggests you put pure SLS on your skin hour after hour and leave it there. That's the way irritability tests are performed. However, in health and beauty formulations, SLS is highly diluted by the other ingredients and is usually rinsed off (in the case of shampoos or body washes), thus minimizing or eliminating the irritating effects. Only those with highly sensitive skin are adversely harmed by the levels of SLS in most products and these effects are usually just mild skin irritations (rash or dry skin).

SLS is used so commonly because it is a very good surfactant. Products without SLS simply will not foam as well and many people don't like that. Many people want lots of foam from their shampoos and body washes.

Sensitive to Market Needs

There has been some evidence that SLS is potentially drying to a small percentage of African Americans. For that reason, Innovative Body Science uses Sodium Laureth Sulfate (SLES), which is a milder surfactant.

Although sulfates are safe we understand that there is a lot of misinformation in the market and thus a demand for sulfate free products. Because we support our clients, Innovative offers "Sulfate Free" Shampoo and Bath Gel to cater to clients looking for such products.

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