

From: Manufacturer of the Skindulgence™ 30-Minute Non-Surgical Facelift  
To: Lexxus International, Inc  
Re: Skindulgence™ 30-Minute Non-Surgical Facelift – question of Lauryl Sulfate related ingredients  
Date: October 1, 2004

**\*\*Please note that the ingredient in the Skindulgence® 30-Minute Non-Surgical Facelift cleanser is Ammonium Lauryl Sulfate (ALS).\*\***

There is a lot of confusion and rumor regarding Sodium Lauryl Sulfate (SLS) which, then become related to associated ingredients such as TEA Lauryl Sulfate and Ammonium Lauryl Sulfate.

First, the need and use of Sodium Lauryl Sulfate (SLS), it is a detergent which is commonly used as a cleansing agent in many personal care products. It appears in toothpastes, shampoos, bubble baths, shaving creams -- any product that requires suds. It is very effective and also very cheap. Most SLS is made from coconut oil because it is rich in the fatty acid called Lauric Acid.

The production of SLS begins with heating coconut oil in water in the presence of Sodium Hydroxide. This converts the coconut oil into fatty acids (Lauric Acid and Glycerin).

The fatty acids are next converted into fatty alcohols by a process called hydrogenation. These fatty alcohols (Lauryl Alcohol) are waxy materials that are excellent moisturizers. For example, Cetyl Alcohol is a commonly used and effective moisturizer in lotions and creams.

Lauryl Alcohol is then converted into lauryl sulfate by a process called sulfonation.

In the final step, Lauryl Sulfate is reacted with sodium hydroxide to produce Sodium Lauryl Sulfate (SLS).

Alternatively, in the final step, when Lauryl Sulfate is reacted with ammonia instead of sodium hydroxide you have Ammonium Lauryl Sulfate (ALS).

Likewise, when triethanolamine (TEA) is used, you have TEA Lauryl Sulfate. Both of these are also commonly used cleansing agents.

There have been safety issues raised about the use of SLS. Some of these issues are valid and some are clearly erroneous. The reports and rumors that SLS can cause blindness as well as cancer are not substantiated and simply not true. There are no legitimate studies or publications which support these reports. Typically, such a rumor appears on the internet or in a sales sheet produced by a company trying to capitalize on a "we don't use SLS" claim. The real problem with SLS is that it is too strong a cleansing agent which too easily strips oils from skin and hair. This can be a genuine problem in bubble baths. Because SLS is so cheap and makes such great bubbles, manufacturers tend to use a lot of it in these formulas. The result can be skin irritation for a child (or anyone) who frequently takes bubble baths or takes long bubble baths.

There are other cleansing and sudsing agents which work just as well. In the Lauryl Sulfate family, TEA Lauryl Sulfate is preferred. This is considerably more expensive but is much milder and less irritating to the skin.

**Ammonium Lauryl Sulfate (ALS):** A surfactant with emulsifying capabilities. It can show irritation for sensitive skin unless used with an anti-irritant, such as Aloe Vera. Studies showing the irritation of Lauryl Sulfates have been primarily looking at its interaction with sensitive skin. Sensitive skin affects about 5% of the population in the United States. A little higher percentage of people with sensitive skin is found in Asia and Scandinavian countries, but still less than 8%. This percentage of the population has sensitive skin that is sensitive in and of itself, not sensitive skin due to hormonal issues and medication.

The sensitivity issue is almost nullified when combined with Aloe Vera, as in the Skindulgence™ 30-Minute Non-Surgical Facelift.

The damaging studies done are on Sodium Lauryl Sulfate (SLS).

As described previously, ALS (Ammonium Lauryl Sulfate) is made of the lauryl coconut soap ester and the sulfate; the same as in SLS, however the irritating sodium atom is not present and instead an ammonium molecule made up of one nitrogen and four hydrogen atoms is used.

ALS is too large of a molecular weight to penetrate the blood system. The damaging studies showing SLS as being a carcinogenic are **not** applicable to ALS. The Cosmetic, Toiletry and Fragrance Association (CTFA) has refuted the bogus claims on SLS. Please visit [www.ctfa.org](http://www.ctfa.org) for their response regarding SLS and cancer, also a response from the American Cancer Society.

**TEA Lauryl Sulfate:** The Lauryl Sulfate is again a surfactant and does show mild levels of skin irritancy for sensitive skin. The studies on this are the same as listed above – TEA Lauryl sulfate is what is produced from the fatty acids in coconut oil when they are reacted with TEA as opposed to lauryl alcohol (SLS) or ammonia (ALS).

TEA (triethanolamine) is an emulsifier and pH adjuster. It is in the Skindulgence™ 30-Minute Non-Surgical Facelift as a stand-alone ingredient as well as combined with these fatty acids from coconut oil which make the TEA Lauryl Sulfate.

**Butylene Glycol:** Is a solvent with good antimicrobial action. It enhances the preservative system in the product. The bad publicity on ingredient is because it is in the same family as the chemical compound as anti-freeze. Any negative studies on this have been on the associated compounds in the “glycol” family and have been in very high dosages of the compound. This is a prime example of the effect of internet urban legends and people being misinformed on studies.

**Titanium Dioxide:** A non-chemical SPF contributor. It is one of 21 FDA-approved sunscreen ingredients. Titanium Dioxide is also used to provide a white color to “stabilize” the color of the product over the shelf life of the product. According to some sources, Titanium Dioxide could be the ideal UVA/ UVB protection component given its chemical, cosmetic, and physical characteristics. A cosmetic grade is used. Grades of titanium dioxide are also used as paint pigment. It is safe and I have not found any substantiated issues on Titanium Dioxide.

The Lexxus International Corporate Team and our product manufacture encourage you to visit [www.ctfa.org](http://www.ctfa.org) as a resource for ingredient questions. This is the site for the Cosmetic, Toiletry and Fragrance Association and there is a great section for consumer information.