Dazzlingly beautiful lips: lip care - ingredients and effects

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Lips and eyes communicate charisma and charm and that is the reason why particular attention is paid to their care. Since the characteristics of the lip area are inherently different from the other facial skin we also use specific care products. What are the ingredients and how do they work?

If we compare the different skin areas of our body we realize that the skin of our lips is rather thin. There are fewer barrier layers with the effect that the blood vessels shine through - the reason for the red color of our lips. Due to the high amount of nerve endings the lip skin is very sensitive and belongs to the erogenous zones of our body. There are neither sebaceous nor sweat glands and in contrast to the other skin lips have no hairs. That is the reason why lip skin easily dehydrates and cracks. Therefore the care of the lips should be focused on the integrity and regeneration of the few barrier layers.

Main objective: regeneration

Traditional lip care concepts are rather contradictory to the idea of skin recovery. They are dominated by mineral and synthetic hydrocarbons which protect the lips against dehydration when applied, however they also lead to the fact that the lips become rather used to their application with the effect that the symptom of dry lips just would remain, even on the contrary: The natural recovery function of the skin gradually slows down and less and less natural barrier substances are formed. A survey on this natural process entitled "Oils and lipids in cosmetic products - mother nature contra petrochemical industry?" has recently been published in the magazine BEAUTY FORUM (03/2008).
Another reason to criticize hydrocarbon formulations is that a large percentage of the lip care products especially of lip sticks is unintentionally swallowed. The question whether the oral intake of hydrocarbons represents a risk to the human health has not been sufficiently solved yet.

Lip care creams & oleogels

Tolerance and above all the long term effects of lip care products are quite important though. Whether the products are of natural or synthetic origin rather plays a minor role. Central point here is that they are physiological. Besides hydrocarbons also additional substances like silicon oils, preservatives (allergenic potential) and emulsifiers (wash-out effect) should therefore be considered from a critical perspective. Many non-aqueous products however will not involve problems with the two last-named substance classes because water free products require neither preservatives nor emulsifiers.
Mineral oils and silicones are still included in many products. They are responsible for the smoothing effects and provide a brilliant look. Alternative products contain vegetable or synthetic triglycerides which can be metabolized by the human body just like cooking oil. The advantage that they can be absorbed by the skin barrier also can be seen as a disadvantage though: The cream has to be re-applied again and again.
A compromise in this case are semi-solid vegetable waxes and wax oils like shea butter and jojoba oil but also hydrogenated vegetable oils like olive butter (made from olive oil). They are fixated on the lip surface with the help of castor oil or trihydroxy stearate which is comparable to hydrogenated castor oil. Castor oil containing substance compounds can also bind pigments; they are appropriate components for tinted lip creams and therefore provide an alternative for lip sticks. Frequently fatty acid salts like e.g. zinc stearate and magnesium stearate are used to thicken non-aqueous variations (oleogels) however, minor quantities of water are sometimes helpful to achieve a specific consistency.
Pigment free versions can be used for a long term lip protection, if phosphatidylcholine (PC) is added. A positive effect is that PC provides both the skin-protecting choline as well as linoleic acid which is required for the synthesis of the barrier active ceramide I and which is also transported by PC. As a negative effect can be stated that PC also accelerates the absorption of the visually appealing lipid substances (see below).

Lip gloss for the dazzling look

Besides the re-fattening care of the skin, lip glosses provide moisturizing components as well as specific brilliance and glitter effects as e.g. by pearl gloss pigments that cause lips to appear moist. The moist and luminous shine on the lips is predominantly due to oils like triglycerides, ester oils, squalane, PAOs (synthetic hydrocarbons) and silicones and particularly emphasizes the erotic appeal. Further ingredients are waxes like beeswax or their synthetic derivatives. A typical spreading additive e.g. is isopropyl isostearate.
Moisture retaining ingredients are collagen products and appropriate vegetable protein substitutes, protein hydrolysates (as e.g. from wheat proteins), aloe and quince seed mucins as well as dextrines and wheat starch. The coloring may vary from transparent to shimmering and to opaque tints. A lot of products also contain curative and anti-inflammatory substances as e.g. echinacea, chamomile, bisabolol, calendula, vitamin E and panthenol. Moisturizing films add a full and attractive look on the lips. "Tasty" product variations are produced by including flavoring additives.
Lip creams are sold in jars and tubes, while lip glosses as lip stick substitutes are applied with the typical roll up stick or with an integrated brush.

UV-protection for lips as well

It is important though that lip care products also provide UV protection as the lips are specifically exposed and sensitive to radiation. Already pigments can provide a filter effect ranging from SPF1 to SPF 4 depending on their concentration. Frequently added are filter substances like e.g. micronized titanium dioxide i.e. colorless titanium dioxide as a mineral protection, apart from these also chemical filters can be contained. When selecting chemical filters, it is important to consider the unintentional oral intake of the substances. For reasons of precautionary consumer protection, the Federal Agency for Risk Assessment (Bundesamt für Risikobewertung, BfR, Germany) for instance advises against the use of 4-methylbenzylidene camphor (INCI) in lip sticks and lip care products. Lip care products with UV filters generally provide excellent sun protection up to SPF 50+.

Lip care with liners and sticks

An important product category are **lip liners** and similar to lip sticks they also contain vegetable waxes as e.g. carnauba and candelilla wax to improve the consistency and bind pigment containing components. Lipid components are vegetable triglycerides in native or hydrogenated form, neutral oil (capric/caprylic triglyceride) and jojoba oil. The above mentioned objections regarding product safety also apply for mineral oil components in lip care products. Basically the formulation of lip liners only differs from lip sticks by a more solid consistency and a higher content of pigments.
Similar to pigment containing lip creams, components like castor oil are also important in **lip sticks** as they remain on the lip surface and thus fixate the pigments. Food safe pigments allow formulations that are free of problem substances and therefore also appropriate for the care of sensitive lips. Pigment free lip sticks as well as pigment free creams are used to retain the skin hydration and to protect the lips during the cold season.
The above mentioned accustoming effect resulting from the use of hydrocarbons like petrolatum, paraffin oils, solid paraffins should also be considered. Physiological concepts prefer long chain triglycerides and vegetable waxes though. The consistency of the sticks is controlled with beeswax, candelilla and carnauba waxes.
Specific agents in form of dry extracts also are potential lip stick components.

The area around the lips

In addition to the lip care the perioral zone around the lips should also be considered. This area is specifically affected by cosmetics and salivation which may cause irritation.
What can be done?

- **Stop using cream products:** When suffering from acute perioral dermatitis it is recommended to stop using skin care creams for a certain while.
- **First aid recommendation:** The treatment with **pure active agent concentrates** like the regenerating **echinacea extract** and **boswellia nanoparticles** have proved successful. Boswellia nanoparticles contain a fat-soluble extract of the frankincense resin which acts as 5-lipoxygenase inhibitor (natural enzyme in the human body). This enzyme participates in the synthesis of inflammation triggering substances. If the effect of this enzyme is inhibited, also erythema and irritations will soon disappear.

Start again with creams: After the skin barrier has been able to recover from the inside, it is possible to gradually start applying skin care creams again.

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