Nowadays consumer expectations concerning rinse off formulations go beyond cleansing. In general, products need to prove their efficacy to convince the customer. Promises on the packaging have to turn into visible or experienced effects. Enjoying cosmetics is a strong item since the wellness wave rolls over the world. If the “feel good” effect is strong enough, a product has good chances to find its market.

To satisfy the users expectations of a cleansing product, it is in the first case essential to be aware of them. Research is important and in many cases turns out to be much more difficult than expected. Due to the fast change of social habits a change in consumer expectations within a few years is usual these days.

Ten years ago, the cleansing effect was the main intention of using a shower gel. An actual survey ranks good cleansing effects of the product at fifth place. First of all people want a cleansing product to be non greasy and second to rinse off well. Third and fourth place are covered by non skin drying and a smoothening effect. This result indicates consumer desire for moisturizing and skin caring cleansing products.

This is a change in the consumer expectations towards shower gels. People are much more aware of their skin conditions and request for a good skin feeling. This corresponds to the demand of looking young and healthy as long as possible. To keep the skin in best, healthiest conditions is the basis for reaching this demand.

The level of natural moisturizing factor (NMF) components and protecting skin lipids, the skins protection shield, decreases with a person’s age. If this barrier function is destroyed by cleansers with a high lipid solubilizing potential, as a result the trans-epidermal water loss (TEWL) increases. Dry skin is the visible sign of high TEWL. Besides this the reduced hydration of the stratum corneum, slows down various enzymatic processes in the upper skin layers. A significant slow down of skin’s metabolism, in most cases results in increased ageing of the skin.

**How to keep the skin young and healthy?**

To keep skin healthy, cleansing products must as far as possible respect the skin’s own protective lipid layers, the so called lipid protection shields. Especially in case of an increased showering frequency, it is even more important to care about this issue. More than half of the female consumers shower at least once daily.

The most common way is to formulate a very mild shower gel, which shows only low sebum extracting properties and therefore does not degrease the skin.

Formulating lipids into a shower formulation results into another still quite new product group, the so called “cream showers”. Compared to classical shower gels or body wash formulations these are real emulsions with an oil concentration of about 10-45 %. Choosing the right formulating approach more or less all types of surfactants can be added.

This combination achieves a very good skin feeling and at the same time reaches a suitable amount of foam. A formulation example you can see in table 1. The third possibility to formulate is the product group of waterfree shower oils. Here about 50% of the formulation consists of oils (see formulation example in table 2). The skin feeling can be influenced by the choice of the oil type and oil concentration. Additionally shower oils can be influenced to form liquid crystals during the dilution process under the shower, systems as they are known from leave on formulations.

Different combinations of ingredients give the possibility to form different liquid crystalline systems. Their bi-layer structures are well known to respect the skin’s own lipids in the best possible way, because of their equivalent formation compared to the skins own lipid shield structures. Liquid crystalline structures of shower oils can easily be identified under the microscope (Figure 1)².

**Figure 1**
Under the shower the skin gets warm and wet. These are perfect conditions for delivering moisture to the skin as the skin hydration is high during and directly after showering. A new trend is to keep this high moisturized condition via avoiding the fast water evaporation process in the first minutes after the shower. A new product line protecting the hydration status of the skin are the so-called “under or in shower lotions” which are applying a protective lipid layer on the skin before using the towel.

### Table 1

**Cream Shower Bath**  
**Type:** Real emulsion shower cream containing 45% vegetable oil, cold processable cleansing emulsion  
**Appearance:** White, foaming, high viscous lotion  
**Active matter:** Approx. 13%  
**Formulation:**  
**Ingredients:** INCI:  
- Rapeseed oil (Brassica Campestris (Rapeseed) Seed Oil) 32.0%  
- Soybean oil (Glycine Soja (Soybean) Oil) 13.0%  
- Antioxidant 1 (…) q.s.  
- Jaguar C-14S (Guar Hydroxypropyltrimonium Chloride) 0.1%  
- Carbopol ETD 2020 (Acrylates/C10-30 Alkyl Acrylate Crosspolymer) 0.6%  
- SETACIN 103 SPECIAL (Disodium Laureth Sulfosuccinate) 8.0%  
- ZETESOL NL-2 U (Sodium Laureth Sulfate) 20.0%  
- AMPHOTENSID B 4 F (Cocamidopropyl Betaine) 5.0%  
- OXYPON 440 (PEG-75 Lanolin) 2.0%  
- PROTELAN AGL 95 (Sodium Lauryl Sulfate) 6.0%  
- PROTELAN LS 9011 (Sodium Lauroyl Sarcosinate) 3.0%  
- Perfume (Parfum (Fragrance)) 0.5%  
- Water (Aqua (Water)) approx. 9.8%  
- Preservative (…) q.s.  

**Manufacturing process:**  
Add Jaguar C-14 S to the mixture of rapeseed oil, soybean oil and antioxidant and disperse, then add Carbopol ETD 2020 and disperse. Afterwards add the other components in the indicated sequence, stir and homogenize. Adjust the pH value to approx. 6.0 and homogenize again.

**Hint:** Microparticles or peeling granulates can be added. Then water content must be adjusted.

The above results have been obtained from trials in our laboratory and plant. In the light of changing conditions, they can serve only as a guide, and are therefore offered without obligation. We ask that the possible rights of third parties are observed.

**Supplier:**  
- 1 www.merck.de, e.g. Oxynex K liquid  
- 2 www.rhodia.com  
- 3 www.noveon.com

**Table 2**

**Oil Foam and Oil Shower Bath (water-free)**  
**Type:** Emollient body wash that turns into a white emulsion when applied under the shower, “water-free cleansing emulsion concentrate”  
**Appearance:** Clear, low viscous, oily liquid  
**Formulation:**  
**Ingredients:** INCI:  
- LUMOROL K 1000 (MIPA-Laureth Sulfate, Laureth-4, Cocamide DEA) 57.0%  
- Perfume (Parfum (Fragrance)) 1.0%  
- Olive oil (Olea Europaea (Olive Oil)) 29.0%  
- Paraffin oil (Mineral Oil) 13.0%  
- Antioxidant 1 (…) q.s.  

**Manufacturing process:**  
Stir all components in the indicated sequence to homogeneity.

The above results have been obtained from trials in our laboratory and plant. In the light of changing conditions, they can serve only as a guide, and are therefore offered without obligation. We ask that the possible rights of third parties are observed.

**Supplier:**  
1 www.merck.de, e.g. Oxynex K liquid

Shower oils have an oil concentration above 50%. This high amount of oils gives the consumer the impression to care the skin with everything it needs.

By using a shower cream the user is reminded of a body lotion and its moisturized skin feeling. At the same time the product foames, which still gives the impression of shower formulation. This combination gives the consumer the impression that he is using a cleansing, caring and moisturising cream shower instead of only a cleansing product which supplies a dry skin feeling.

In the recent years the mind of the consumers has changed. Healthiness, wellness and care became more and more important and this opens new chances for formulators to meet the expectations of the consumers.

### Literature

2. Ulrike Marx, Torsten Krohn, “Using liquid crystals in cleansing formulations” Personal Care, September 2008;  