

Trends

“Green” formulations are much in demand



Emulsions with sensory effects are very popular

photo: Decléor

COSSMA spoke to representatives from Cognis, Kolb and Zschimmer & Schwarz about the latest developments in emulsions. In summary, the main features are “green” emulsions, cold processing, and the trend towards liquid crystal, lamellar systems.

Bettina Jackwerth, Global Marketing Skin Care at Cognis:

At the moment “green” emulsions are setting the trend and it is a trend which we believe will continue. It is also expected that the big companies, that previously set little store by this feature in their product positioning, will tend to be greener in the future. This can already be seen in their current acquisition strategy. In this situation traditional manufacturers of natural cosmetics are facing the challenge of successfully positioning themselves against new natural products and brands in the mass market.

When developing a “green” formulation certain ingredients are to be avoided, but can in most cases be substituted by plant-based alternatives. Overall there are relatively few limitations as far as formulating is concerned. It is however difficult when creating natural sun protection products because there are hardly any natural UV filters, and there is a fair amount of debate when it comes to deciding just how natural, for example, titanium dioxide and zinc oxide are. There are a few substances with a UV absorbing action but it is difficult to use them to achieve comprehensive UV protection.

It is also impossible to formulate antiperspirants with natural ingredi-



ents because the active substances that restrict perspiration are not regarded as natural. This enables manufacturers of natural cosmetics to position themselves in this market with deodorants, which are not usually emulsion based, but more likely to be aqueous/alcohol based.

With reference to environmental considerations there is a growing interest in formulation techniques that are not only “green” but that also save energy. From a production point of view that can best be achieved with free-flowing ingredients.

Nicole Häusler, Product Manager Personal Care, Kolb Distribution:

There is a growing call for PEG-free emulsifiers, and not only from traditional natural cosmetics companies. PEG-free emulsi-

fiers today are available for many, many applications, from emulsion-based sprayable sun protection products through to liquids for impregnating wet wipes, and from deodorants to thick creams. They are compatible with the usual ingredients and are electrolyte stable. They are suitable for the production of O/W and also W/O emulsions. New developments in the field of liquid PEG-free emulsifiers now allow production at room temperature. Cold production of emulsions is playing an

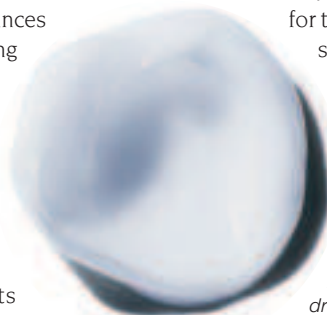


photo: La Roche-Posay

Moving away from the classic droplet structure and towards a liquid-crystalline lamellar structure

ever more prominent role, allowing CO₂ emissions to be reduced as well as saving time and energy. And of course development laboratories these days have less and less time to work on new products, given the urgency with which they have to be brought to market.

Ulrike Marx, Head of Applications Technology for Surfactants at Zschimmer & Schwarz:



Given all of the latest developments in emulsions we should categorise them into rinse-off and leave-on formulations. Whilst at one time emulsions were used exclusively for skin care products we are now seeing more and more rinse-off emulsions in skin cleansing products. And emulsion systems are not only used in face and body cleansing products but also, for example to create pH neutral shaving creams, or a shaving oil in the form of an emulsion

concentrate. The skin feel imparted by the product is taking on added importance for modern consumers who often do not have the time or the inclination to indulge in the full skin care range. Convenience is as much the "name of the game" for stressed-out working women as it is for men with their recently increased awareness of personal care routines.

These developments call for a new understanding of the latest emulsion-based cleansing systems that give the skin added protection, or defend it better against negative influences on the barrier lipids.

With leave-on emulsions the trend is clearly away from classic emulsions with a droplet structure, and towards liquid-crystalline lamellar systems. Such systems offer advantages with re-

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spect to their effect on the skin and also with respect to the formulation itself. Liquid-crystalline lamellar systems exhibit certain specific physical properties

whose potential has so far not been fully identified but which will be investigated in the coming years. In their application we foresee new effects on and in the skin, based on their structural similarity to the lipid structures in the stratum corneum. The suitability of these emulsion structures as carrier systems has already been the subject of increased discussion for some time now. I am convinced that there are exciting times ahead concerning emulsions. ■

* Interesting formulation ideas can be found on the Internet (see Internet button)





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