

Dermatological cosmetics - linking cosmetics and medicine

published in *Kosmetische Praxis* 2005 (5), 12-14

The term "dermatological cosmetics" already alludes to the combination of dermatology and skin care. Dermatological cosmetics, what does it actually mean? What is the difference between dermatological and conventional cosmetics? Based on a present-day example the concepts of dermatological skin and beauty care and their compatibility with the existing law will be described in the following.

Composition, use and marketing of cosmetic and pharmaceutical products are subject matter of different European and national laws, decrees and guidelines. Regarding the precise definition of both the product groups there is no clear dividing line, a condition which subsequently has been evolving into a vague grey area.

What are cosmetic products?

Section 1, paragraph 4, of the law concerning the trading of food, tobacco products, cosmetic products and other consumer goods defines cosmetic products as follows: "Cosmetic products as defined by this law are substances or preparations of substances designed for the cleansing or care of the external body or oral cavity, or the influence on the outer appearance or body odour, or the transmission of olfactory sensations unless they are predominantly used to soothe or cure sickness, suffering, bodily damage or pathological condition". To a major part this corresponds with the European guidelines 76/768/EWG and 2003/83/EG, however is not identical: "Cosmetic products are substances or preparations designed for the external contact of different parts of the human body like skin, hairs, nails, lips and genitals or for the external contact with teeth and the mucous membrane of the oral cavity with the exclusive and main objective of cleansing, perfuming, influencing the outer appearance and/or body odour and/or of protecting or keeping it in good condition."

According to the judicial decision though, a dandruff shampoo containing the antimycotic substance clotrimazol for example has to be categorised as a cosmetic product even if the substance clotrimazol otherwise is used for antimycotic effects in pharmaceutical preparations. Significant here is the circulation from the viewpoint of the consumer and that there are no statements made regarding the curing and soothing of diseases.

Classifying the substances

Substances approved for cosmetic products in Germany may only be partially licensed or even prohibited in non-European countries since they may belong to the group of pharmaceutical additives there like coenzyme Q10 for example. On the other hand, many substances are added to cosmetic as well as pharmaceutical preparations as e.g. the vitamins A, C, E and K, D-panthenol, echinacea, hamamelis, urea, salicylic acid and phosphatidylcholine. Hormones are only approved for dermatological preparations whereas phytohormones, i.e. hormones of vegetable origin but with similar effects, may also be added to cosmetic products. The list here could be easily continued, a fact which can also be interpreted as a major grey area between skin care and dermatology.

The widespread use of substances like D-panthenol however does not yet justify the term "dermatological cosmetics" which has been a point at issue within the framework of the cosmetic decree for quite some time. In this connection the explanation for rejecting a warning regarding the term "dermatological cosmetics" several years ago is quite informative as it adequately describes the basic idea of dermatological skin care concepts. In the following there is an abridged version of the text with minor editorial changes.

Dermatological – what does it mean?

Just to explain it from the start: the term "dermatological" is not referred to a cosmetic treatment or activity which is comparable with the medical treatment by the dermatologist and thus prohibited by law for cosmeticians. "Dermatological" in connection with "dermatological cosmetics" (synonyms: dermocosmetics, cosmeceuticals) is a quality feature and among others enables a cosmetic treatment adapted to the physiological needs of the individual skin. Therefore skin care concepts based on creams which can be used in dermatological (dermatologist) as well as

cosmetic treatment and which are designed for adequate skin care as well as supportive prevention (beauty institute) gain more and more importance. Barrier creams with membrane structure fulfil both the requirements. In fact, the beauty institute uses them as a base cream to apply separately or in combination with cosmetically active agents, and dermatologists or pharmacists also take it as a pure base cream for prescriptions, either separately or in combination with pharmaceutically active agents.

Quality features

The fact that skin cleansing products do not correspond to the physiological conditions of the skin has been described by E. Kownatzki in his article "Gesundheitsschädliche Wirkungen von Kosmetika" (adverse health effects of cosmetics), published in *Kosmetische Medizin* 21 (1), 26-27 (2000). Note: these are products, which are in accordance with the cosmetic decree. Though, it is recommended that cosmeticians and dermatologists closely cooperate, to achieve good cosmetic results in the long term with respect to the consumers.

As already explained above, the term "dermatological cosmetics" in summary describes the quality features. This however does not apply for the claim "dermatologically tested" which actually is completely unnecessary as this already should be taken for granted and beyond that, it is quite misleading as there is no further information given regarding the test results. From a chemical point of view the criteria for dermatological cosmetic are that they are free of non-physiological emulsifiers, preservatives, mineral oils, perfumes, dyes and additives.

Taking a closer look on the ingredients in conventional cosmetics (INCI) these criteria can hardly be taken for granted. As Kownatzki stated in his paper mentioned above, emulsifiers may cause neurodermatitis. As a matter of principle, cosmetics designed in terms of the dermatological point of view should therefore be free of emulsifiers. Without doubt, perfumes are mentioned as the number one of sensitising substances today. Similar to preservatives individuals with a very sensitive or even pre-damaged skin are mostly affected. Specifically in high concentrations mineral oils and also silicones may impede the natural regeneration of the skin; studies of renowned scientists have proved it.

Adding to cosmetics only the preservatives mentioned in the supplement of the cosmetic decree in order to avoid health hazards is no longer state-of-the-art. Fact is that the manufacturing costs of products free of preser-

vatives and perfumes which by the way not necessarily involve a shorter shelf life, usually exceed the costs of conventionally preserved and perfume-containing products. Particularly water-containing creams require different ingredients and especially unscented raw materials. Due to the rising costs today, quite a lot of manufacturers have difficulties in switching over to an uncompromisingly dermatological product range.

Supportive prevention

Unfortunately, the properties of the substances which show counterproductive effects after a long-term treatment and thus should be avoided are predominantly cited in dermatological and less frequently in cosmetic literature. Dermatology basically deals with the needs of the skin itself. The term "derma" means skin and the entry in the German encyclopedia "Brockhaus" then directly refers to "skin". And accordingly, dermatology explicitly and exclusively means skin science. Consequently another feature of dermatological cosmetics is a potential supportive care and prevention of skin disorders or even diseases.

In this case special emphasis is given on skin protection as described above in the European guidelines which consequently results in additional quality features like e.g.

- skin-identical or skin-related components (cf. derma)
- creams with a physical structure identical to the membrane-like composition of the skin barrier layers.

So far to justify the rejection of the above mentioned warning regarding "dermatological cosmetics".

Excellent tolerance

The number of quality features mentioned shows that dermatological cosmetics provide excellent tolerance for the care of sensitive and/or damaged skin. Professor A.M. Kligman, the internationally recognised dermatologist was able to prove that only the presence of individually adapted cosmetic agents can significantly improve the skin condition in a clinical sense. Based on this knowledge, Kligman founded the corneotherapy which focuses on ameliorating the stratum corneum *without any pharmaceutical agents*. Following his method it should be one of the major tasks of cosmetics to consider the principles of corneotherapy in the preparation of cosmetic products in order to maintain or improve the skin condition, especially with the background information that the number of skin damages

and above all barrier disorders rises steadily. Dry skin already is the most basic barrier disorder.

The complex subject and specifically the skin diagnoses demand for an excellent professional and continued vocational training of the employees in the cosmetic sector, which in fact cannot be taken for granted today. Cooperating with dermatologists who are open-minded towards corneotherapy may help select and apply dermatological cosmetics in order to achieve the maximum efficacy.

Dr. Hans Lautenschläger