

Dermopharmacy - decorative cosmetics for problem skin

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Decorative cosmetics still leads a shadowy existence in many pharmacies. Wrongfully - as it is desperately needed specifically in the problem skin area in order to reduce the psychological strain of the individuals concerned. The following article describes preparations which form a valuable supplement in the pharmacies' shelves in combination with active care products and a well-founded professional advice.

Make-up always is cosmetics in its proper sense as the priority is given to the optical appearance of the skin. This has been the popular belief for a long time and any questions concerning the composition seemed to be of secondary importance. However, since keywords like anti-aging, dermopharmacy and corneotherapy¹⁾ have gained more and more importance, the ingredients of decorative cosmetic products increasingly have become scrutinized regarding their physiological tolerance and their influence on the regeneration of the skin.

Medical camouflage

Traditional decorative cosmetics cover the skin in the true sense of the word. A mask-like appearance which is still favoured in Asian countries serves as evidence for this type of products. It goes without saying that decorative skin care cannot dispense with camouflage altogether as it covers up the eye-catching anomalies like naevi or scars. Long-chained hydrocarbons like paraffin oils, vaseline or mineral waxes as well as synthetic poly α -olefins and silicones are the carrier substances for the pigments. Additives are required to guarantee a smear and waterproof use. Despite of its thick layer the camouflage still excels by its high elasticity.

A useful field of application for camouflage for instance are short-term bride make-ups. In case of a long-term application however the natural regeneration of the skin will suffer from the complete coverage which is comparable with the use of band-aids. It is therefore important to leave camouflage on the skin only as long as it is really needed.

Make-up for problem skin

Problem skin is characterized by barrier or cornification disorders, irritations, spider veins and a high sensitivity to allergens and requires natural make-up products which do not inter-

fere with the natural skin functions. That is the reason why compromises are necessary regarding the composition of the make-up. It is therefore recommended to provide an interaction of active agents, skin care base and make-up as described in the following:

- Selective application of the required active agents for problem skin in form of mono substances, extracts and oils with the help of carrier systems like liposomes and nanoparticles.
- Application of an adequate base cream free of additives like mineral oils, silicones, perfumes, preservatives and emulsifiers on the entire face
- Application of the make-up which in chemical and physical respect is adequately adapted to the first two treatment measures.

The above mentioned treatment sequence may also include cleansing, toning and if appropriate also the application of masks. The care of problem skin however requires that counterproductive additives are avoided and that the treatment is adapted to the physiological necessities of the skin. The first two treatment sequences may be combined, either in form of a finished cream product containing active agents or with a base cream formulation that has been adapted in the pharmacy.

Today's base creams with membrane structure²⁾ are appropriate skin care products for this purpose as they provide the skin with lipids and moisturizers and simultaneously form a base for the following make-up application. It should however be taken into account that the active agents in base creams reach the skin in diluted form.

Base creams with membrane structure for the care of the skin are not able to stabilize pigments in an appropriate concentration which means that they cannot be used for decorative purposes. They have to be enriched with triglycerides as e.g. castor oil in native or hy-

drogenated form. As these lipids form hydrogen bonds they improve the adhesion of the base creams on the skin surface. The results are base foundations which can fixate the pigments without involving comedogenic effects.

Active agents, base creams and pigment-containing foundations based on physiological components optimally support the natural regenerative processes of the skin simultaneously with a visible change of the skin surface. As the base creams with membrane structure are also used for pharmacy prescriptions not only cosmetic but also pharmaceutical agents can be added to the creams.

In severe cases like inflammatory acne for example an antibiotic may be prescribed in the pharmacy formulation of the base cream to begin the treatment which then is followed by a cosmetic agent rich in linoleic acid as for example native phosphatidylcholine in form of liposomes in the same base cream for a subsequent cosmetic prevention.

The pigments used in the foundations mainly consist of titanium dioxide, silica, mica and iron oxides. Due to their multi-layered structure and the influence of the light reflection involved herewith, a whole range of different optical effects may be generated up to a virtual reduction of wrinkles.

Adapted foundations

The foundations described enhance the natural appearance of the skin. The colouring of the foundations consisting of base foundation and pigments may be adapted to the respective needs. This however requires basic knowledge in make-up artistry in form of an analysis of the natural skin tone³⁾.

A distinction is made between the visible skin appearance and the skin undertones. Apart from the visible skin appearance the skin undertone may be pink (red) or yellow (beige). Pink coloured skin appears lighter than beige coloured skin. Individuals with a dark skin colour may also have a red skin undertone. Sensitive skin which is susceptible to erythema may also have a beige coloured skin undertone. Yellowish skin will take a yellowy-brown, golden or hazel tan after sun exposure. Pink coloured skin will adopt a coppery tan after sun bathing.

Skin tone analysis helpful for selection of colour

To determine the skin undertone it is necessary to press a slide against the front which helps to remove the red portion (haemoglobin). Now a yellowish skin undertone (carotene) is clearly visible besides the melanin which in-

forms on the grade of tanning. If the skin appears whitish, the undertone is pink.

After analyzing the skin tone the base foundation can be individually adapted with the help of a colour chart. But also before recommending appropriate finished foundations it is helpful to analyze the natural skin tone in order to avoid disappointment on the part of the customers.

It is evident that foundations for the application on problem skin will not provide the same coverage as traditional make-ups as this would impede the natural regeneration of the skin. It goes without saying that make-up products for problem skin can also be used for the decorative care of normal skin.

A positive aspect of pigment containing make-up products is a light protection against UV radiation which may vary between SPF 1 and SPF 4 depending on the concentration of the pigments. Consequently it is not necessary to add chemical filters which can be frequently found in day care creams and may cause allergic reactions.

The production of lip sticks requires non-aqueous formulations. Native and hydrogenated castor oil also are necessary ingredients for an adequate adhesive capacity of the products. Consistency and spreading characteristics are determined by waxes like carnauba wax, bees wax and shea butter. The use of food-safe pigments allows formulations which are largely free of problematic substances and may also be applied on sensitive lips. In this connection it should be considered that a great deal of the lip stick substance ends up in the consumer's mouth.

Powders and potential ingredients

An important item of the make-up product range are powders for the individual use or for an application on the foundation base. If they contain urea they may be processed from the above-mentioned pigments without adding preservatives^{4,5)}. Urea suppresses the itching and supports the skin hydration. This type of powders may absorb skin lipids however will not have any dehydrating effects.

Polyamides, natural clays and magnesium stearate increase the adhesive characteristics of the powders. Talcum can be avoided. Silk powder, synthetic polyamides and boron nitride provide a pleasant feeling on the skin.

Compact powders additionally require binding agents, mostly in form of waxes, long-chained alcohols, oils and fatty acid esters and undergo a pressing process. For dermatological applications the powders can additionally be formulated with pharmaceutical agents like local anaesthetics, antibiotics and antiseptics.

Powders can also be used to reduce the visibility of wrinkles provided that special pigments (filler) are added which generate a diffuse light reflection. As their absorption is minimal and the transmission of the diffuse light is high, these powders enhance the natural skin colour and minimize contrasts which form in the depressions of the wrinkles.

Mascara & Co

For waterproof mascara applied to enhance, dye and reinforce the eyelashes, mineral or vegetable waxes are used in combination with dyes and pigments and dissolved or dispersed without water in volatile hydrocarbons or silicones. Water containing mascara (emulsion) mostly has no waterproof characteristics after the surface drying.

The tolerance of mascara ingredients plays a minor part as its direct contact with the skin is rather limited. Not so for eye shadow products which frequently are formulated like water-free mascara. Before their application though, it is recommended to carefully study the INCI with respect to the criteria for problem skin.

The use of Kajal pencils as eyeliners or lip-liners is very popular as well as of concealers for a precise covering of minor anomalies. They are manufactured by slip-casting and consist of waxes, oils, esters, pigments, including fillers and long-chained acids like stearic acid. Concealer pencils can be produced without perfumes, preservatives and other substances which have counterproductive effects on problem skin.

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