

What's New in Colored Cosmetics for 2007? Understanding Line-Erasing, Lip-Plumping, and Age-Defying Cosmetics



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Have you ever wondered how products erase undereye lines? Is this possible? Have you ever wondered how lip-plumping lipsticks work? How can they claim to use hyaluronic acid effectively in a noninjectable form? Have you ever wondered if age-defying facial foundations really turn back the clock? How do these foundations create the illusion of younger skin? These are rather interesting questions with equally interesting answers.

Lipsticks, facial foundations, and cosmeceutical treatment creams have little to do with dermatologic disease, yet patients frequently ask if these cosmetics offer skin benefits. It is amazing to consider the technology used by some of these cosmetic formulations to create illusion and improve appearance. For this reason, they are worthy of discussion. This article focuses on some of the most significant developments in colored cosmetics during 2007.

Undereye Line-Erasing Cosmetics

You may have noticed an increase in the number of cosmeceutical manufacturers advertising undereye line-reducing products in professional journals. Although I find these journals to be an unusual place to advertise products without presenting clinical data, it is worthwhile to survey the most popular ingredients that are incorporated into undereye moisturizers to deliver anti-aging benefits.

The methods for cosmetically improving the appearance of undereye tissues include reducing blood flow, applying topical astringents, changing tissue optics, and

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changing the refractive index of the interface between air and the stratum corneum. Probably the most interesting method for improving undereye bags is the reduction in blood flow. One of the reasons the area beneath the eyes appears puffy is poor venous outflow of the undereye vasculature. It is commonly stated at cosmetics counters that if less blood reached the undereye tissues, perhaps there would be less tissue edema. MDI, a derivative of shark cartilage high in mucopolysaccharides, has been commercialized and shown in tissue samples to reduce blood flow. This effect forms the basis for the efficacy claims made about products sold at cosmetics counters and those in the physician-dispensing market.

Some of the older formulations for reducing undereye circles contain the astringent witch hazel. Witch hazel is thought to change blood flow kinetics around the eyes by increasing venous tone. There are few data to substantiate this effect. However, topical witch hazel applied to the undereye area does create the sensation of tightening after application.

Probably the most successful temporary method of reducing undereye fullness and circles is the use of topical optical agents that change light reflection from the tissue beneath the eyes. The easiest cosmetic correction of undereye darkness is reduction of shadows. Shadows are created around the eye area by a prominent superior orbital rim, a recessed eye, or increased pigmentation. All of these conditions decrease the amount of light that is reflected from the undereye skin back to the observer's eye. If the amount of reflected light could be increased, the darkness under the eyes could be reduced. This is best accomplished by topical products containing light-reflective pigments. Since pigments can now be ground into very small particles, a combination of pigments and light reflectors can be created to lighten the undereye tissues using camouflage and to increase light reflection. This is how most line-reducing undereye moisturizers work.

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Finally, the effect of the moisturizer on altering the interface between air and skin is also important. If light can be prevented from penetrating through the skin down to the vasculature, the purplish-gray appearance of the skin can be improved. A variety of emollients and oily substances can be combined to improve the feel of the skin and to alter light penetration. Most of these undereye moisturizers are dimethicone based, with film-forming agents, such as proteins, added. In most commercial preparations, the concentration of these expensive proteins is minimal. Their optical and moisturizing effects are probably more important than any cellular behavior modification that might occur.

Lip-Plumping Lipsticks

The approval of new injectable fillers to enhance lip fullness has created tremendous interest in topical cosmetics to replicate this effect. Many of these lip plumpers advertise hyaluronic acid as their active ingredient. New raw materials consisting of small hyaluronic acid spheres have been developed in the cosmetic industry. These spheres expand when placed on the skin surface from an oily vehicle. The spheres tend to collect in the folds of the lip and expand to create a more even surface for lipstick application. The effect is temporary and lasts until the spheres are removed. Other products contain a similar ingredient known as marine atelocollagen, which is formed into a sphere but does not absorb as much water.

Most lip-plumping cosmetics are rich in silicone technology to improve the shine and smoothness of the lips. Dimethicone is the main shine ingredient, but it must be combined with other silicones to stay in place. Stearyl dimethicone is an alkylmethylsiloxane, which is a wax, not an oil, that melts at body temperature to increase lip hydration. Stearyl dimethicone can be combined with

perfluorononyl dimethicone to increase the wear of the lip cosmetic and make the lips feel smooth.

Age-Defying Facial Foundations

The last area for discussion is the realm of age-defying facial foundations. I am not sure what *age-defying* means, but I assume it is synonymous with *antiaging*. These foundations minimize the appearance of fine lines and wrinkles, again by modifying the amount of light returned to the eye of the observer. Wrinkles appear dark not because they contain more pigment than the rest of the skin, but rather because the fold is farther away from the eye than the surrounding skin. The trick is to get enough light into the wrinkle to increase light reflection and minimize the dark appearance. Age-defying facial foundations rely on the same sophisticated pigment technology as the undereye circle products previously discussed. The evenness of the film and the distribution of the pigments over the skin surface account for the temporary improvement in appearance.

Summary

Line-erasing, skin-plumping, and age-defying cosmetics are similar to magic tricks. During a magic show, everyone sees the dove disappear, knows that its disappearance is an illusion, and wants to find out how the magician accomplished the feat. The new developments in colored cosmetics are similar to the magician's tricks. The lips appear slightly plumper, shinier, and more attractive, but how does the cosmetic create this illusion? This article has served to tell a few of the "secrets" behind the cosmetic magician's tricks. Even though we know that the final result is cosmetic illusion, there is no doubt that magic sells and that these illusions are an important part of our dermatologic knowledge base. ■