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Dual function make-up formula for pre-rosacea skin: camouflage and treatment with anti-inflammatory compounds.

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Introduction

Pre-rosacea is a skin condition associated with skin erythema and its tendency to flush and blush. It is common for patients to cover the skin redness with corrective makeup. However, those symptoms should also be treated topically with anti-inflammatory agents to prevent the development of rosacea. The aim of this work was to evaluate safety and efficacy of corrective make-up in volunteers with pre-rosacea, dilated capillaries and after aesthetic treatment with tendency to erythema and subcutaneous hematomas. The tested formula contained two anti-inflammatory active ingredients: acetyl tetrapeptide-33 (Lipotec) and *Laminaria ochroleuca* extract (BiotechMarine).

Methods

The *in vivo* study included 29 participants aged 24-58. They applied the foundation on face area, once a day for 2 weeks. Measurements of erythema intensity were taken before and after the treatment with VISIA System (Canfield) and the camouflage effect was shown by photographic imaging system (FotoFinder). Additionally, the participants evaluated application and skin care properties in a questionnaire.

Conclusion

The instrumental and subjective *in vivo* evaluation of fluid foundation containing anti-inflammatory tetrapeptide (2,5 ug/g) and *Laminaria ochroleuca* extract (0,01%) confirmed its dual action – high coverage camouflage as well as relieve in capillary issues. Acetyl tetrapeptide-33 inhibited the production of IL-6 and IL-8 and *Laminaria* oil extract (containing mainly lipoic acid) inhibited the release of IL-6 as well as other pro-inflammatory molecules: IL-1, IL-10, PGE-2, TNF-α, LTB-4 and COX-2 induced by UVB radiation. Additionally, this component was involved in inhibition of neuro-inflammatory cascade: Substance P, CGRP and acetylcholine. These mediators could induced neurogenic inflammation, which is associated with the occurrence of many skin disease including pre-rosacea and rosacea. The obtained results showed that the product could be used during treatment of these skin disorders as well as after aesthetic treatment. Finally - thanks to its dual function improved the patients quality of life.

Results

The instrumental measurements showed decrease in number of dilated capillaries by 19% and reduction of redness visibility and intensity by 15% in 50% volunteers. Moreover, we observed 8% decrease in number of dark spots in 80% of volunteers (Fig. 1). The best case report showed reduction of erythema visibility and intensity up to 23% after only 2 weeks of application (Fig. 3). The instrumental evaluation included also the assessment of corrective properties of foundation – we noticed very good covering effect after 1 application (Fig. 2).

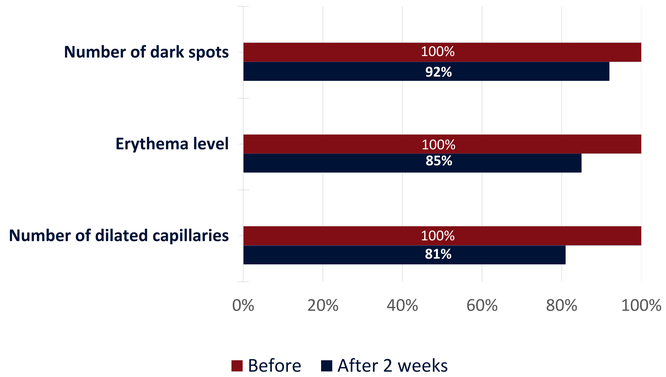


Figure 1. Instrumental skin analysis before and after 2 weeks of product application evaluated by VISIA System.

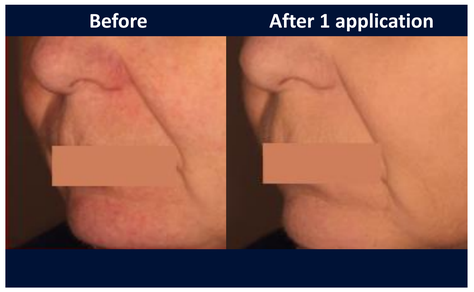
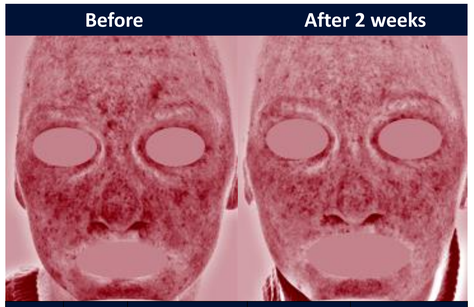


Figure 2. Assessment of correction and camouflage efficacy by photographic imaging system (FotoFinder).



Id	age	before	after 2 weeks	reduction
ML	36	40,209	30,932	**-23%**

Figure 3. Best case report of skin redness reduction evaluated by VISIA System.

Self-assessment questionnaire

97% of patients confirmed that tested product was very well tolerated. Additionally, 100% of participants confirmed excellent coverage of red areas and 93% observed reduction of erythema level. Moreover, the application properties were positively evaluated by volunteers and 90% of patients expressed their wish to use this product in the future (Tab. 1).

Statements	% of patients
the product covers visibility of capillaries	**100%**
the formula reduces skin redness	**93%**
the product alleviates irritation	**93%**
application is easy and convenient (applies evenly – no streaks)	**93%**
wish to use this product in the future	**90%**

Table 1. Patients' self assessment after 2 weeks of product application.