

# Using a combination of retinol, azeloglycine and collagen peptide complex in cosmetic emulsion dedicated for perimenopausal women.

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## Introduction

Menopause is a crucial period in women's life. There are significant hormonal changes, that are reflected in the skin. The most common symptoms are: hair loss, dry skin or increased tendency to irritation. Another signs of menopausal ageing are wrinkles, uneven skin tone and decrease in skin elasticity and firmness. The proper skin care can delay those symptoms. A lot of active ingredients, available on the market, may help keep younger appearance. Daily care products recommended during menopause period usually contain retinol, phytohormones, peptides, vitamins C or E with proven anti-ageing properties.

**Aim of the study was to investigate if the cosmetic product (emulsion no. 2812) containing retinol encapsulated in ceramide microspheres (1%), azeloglycine (2,5%) and collagen peptide complex (0,1%) showed anti-aging effect in a group of perimenopausal women.**

## Methods

Group 1: the double blind, split *in vivo* study was performed in a group of 13 women (age 46-57) who were using active and placebo formulations. The participants were asked to use products separately (left and right side) once a day (at evenings) for 4 weeks. Instrumental skin evaluation was done at the baseline and after 4 weeks of products application. Skin topography parameters were analyzed by VISIA, Primos and VISIOSCAN system.

Group 2: test was taken in a group of 25 women (45-58 years old) used only the active form of emulsion. After 4 weeks of test, they completed a satisfaction questionnaire. In addition to this 15 of them had also instrumental skin evaluation (as described above).

## Results

Visioscan parameters	placebo formulation	active formulation
Cont-general skin condition	no improvement	6%
Var- the degree of skin unevenness	no improvement	-4%
Sesc-scaliness	no improvement	-11%
SEsm - smoothness	10%	10%
Volume of wrinkles	-13%	-25%

Figure 1. Instrumental skin analysis measured at baseline (before application) and after 4 weeks of using active and placebo formulation. Biometric measurements of skin after active cream application showed an improvement in general skin condition by 6%, reduction in skin scallines by 11% compared to no improvement after placebo formulation usage. Volume of wrinkles was reduced by 25% (active formulation) and by 13% (placebo formulation). Both (active and placebo) formulation resulted in improvement in skin smoothness by 10%.

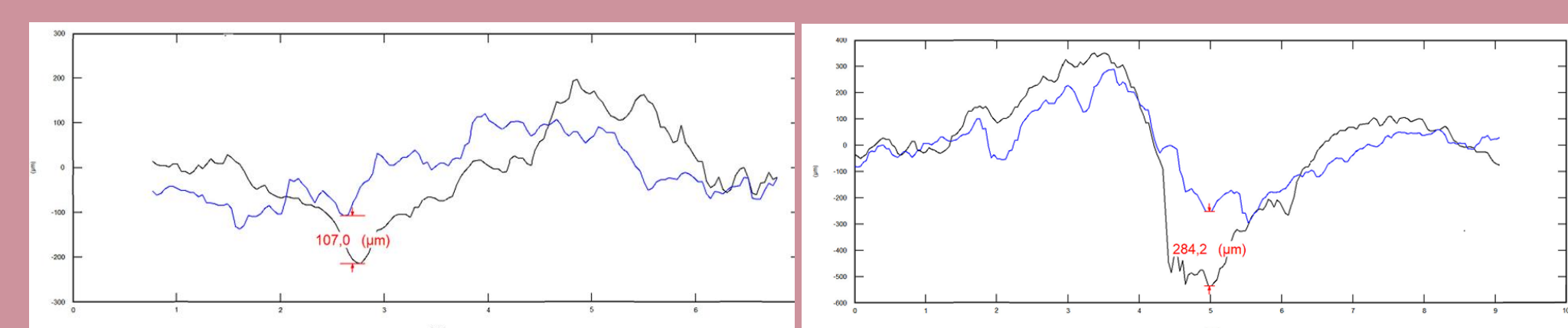


Figure 2. Placebo treatment showed reduction in nasolabial furrow depth by 107,0 µm (left side) and after active formulation treatment by 284,2 µm (right side).

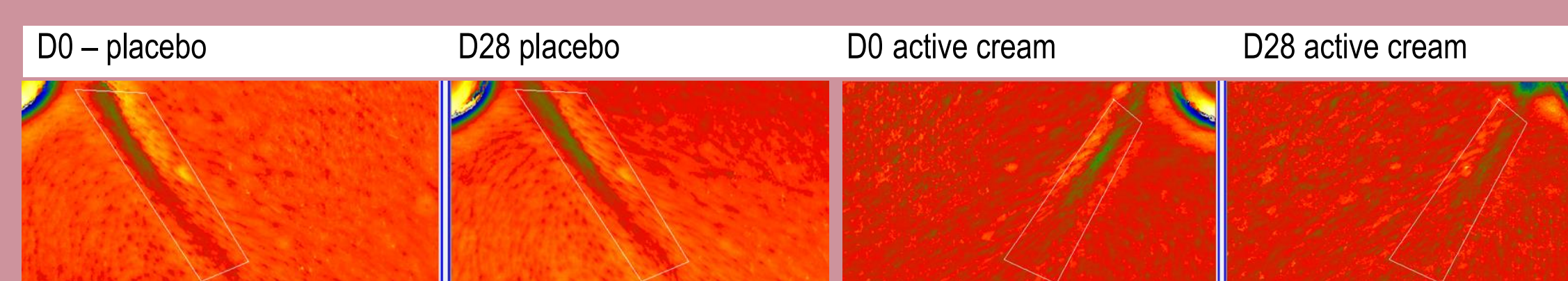


Figure 3. Placebo treatment showed no reduction in nasolabial furrow volume (left side) and by 24% after active formulation treatment (right side).

### Group 1 – placebo vs active formulation

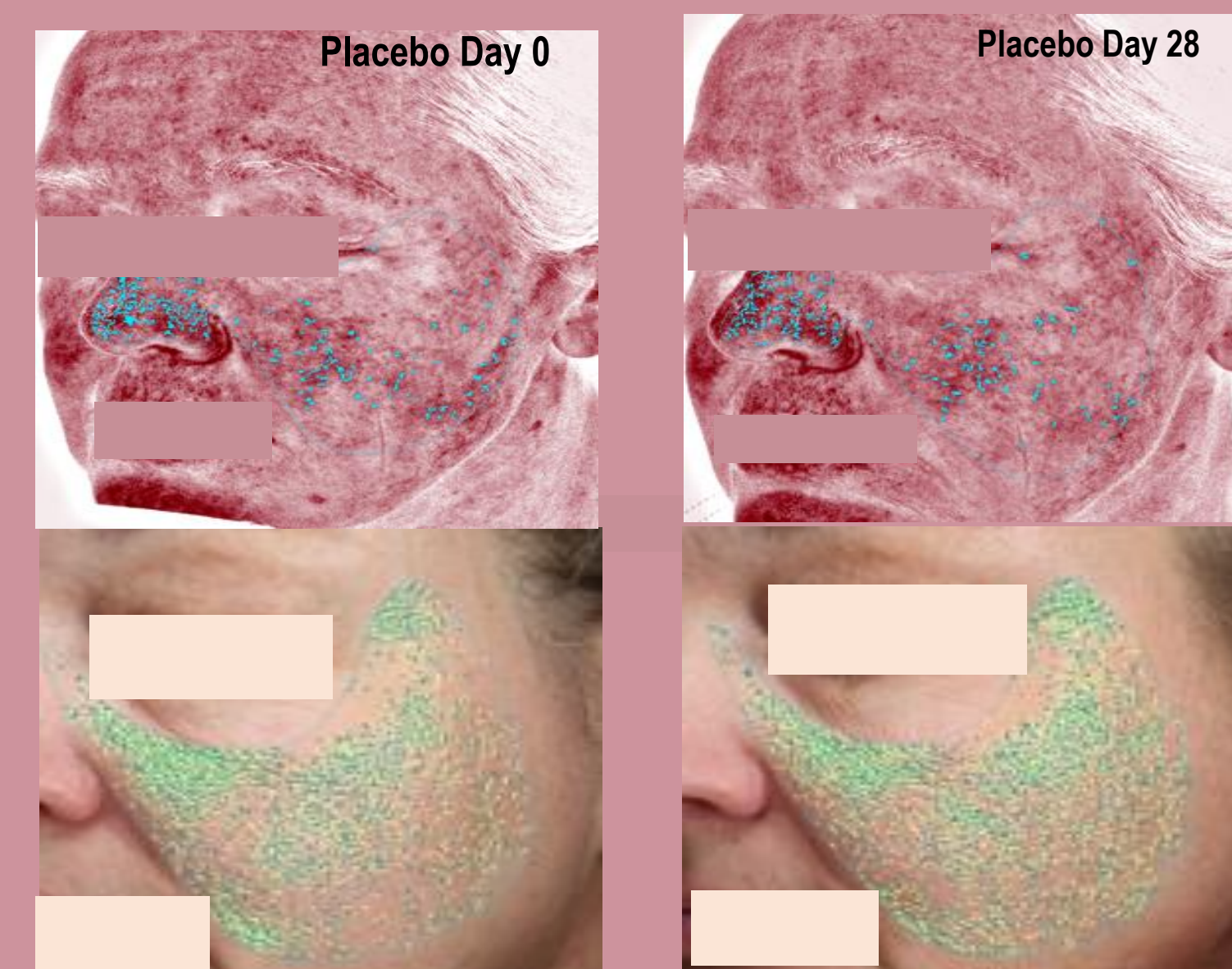


Figure 4. Instrumental analysis taken after 4 weeks of placebo formulation usage showed reduction in skin redness by 2% and no improvement in the skin texture.

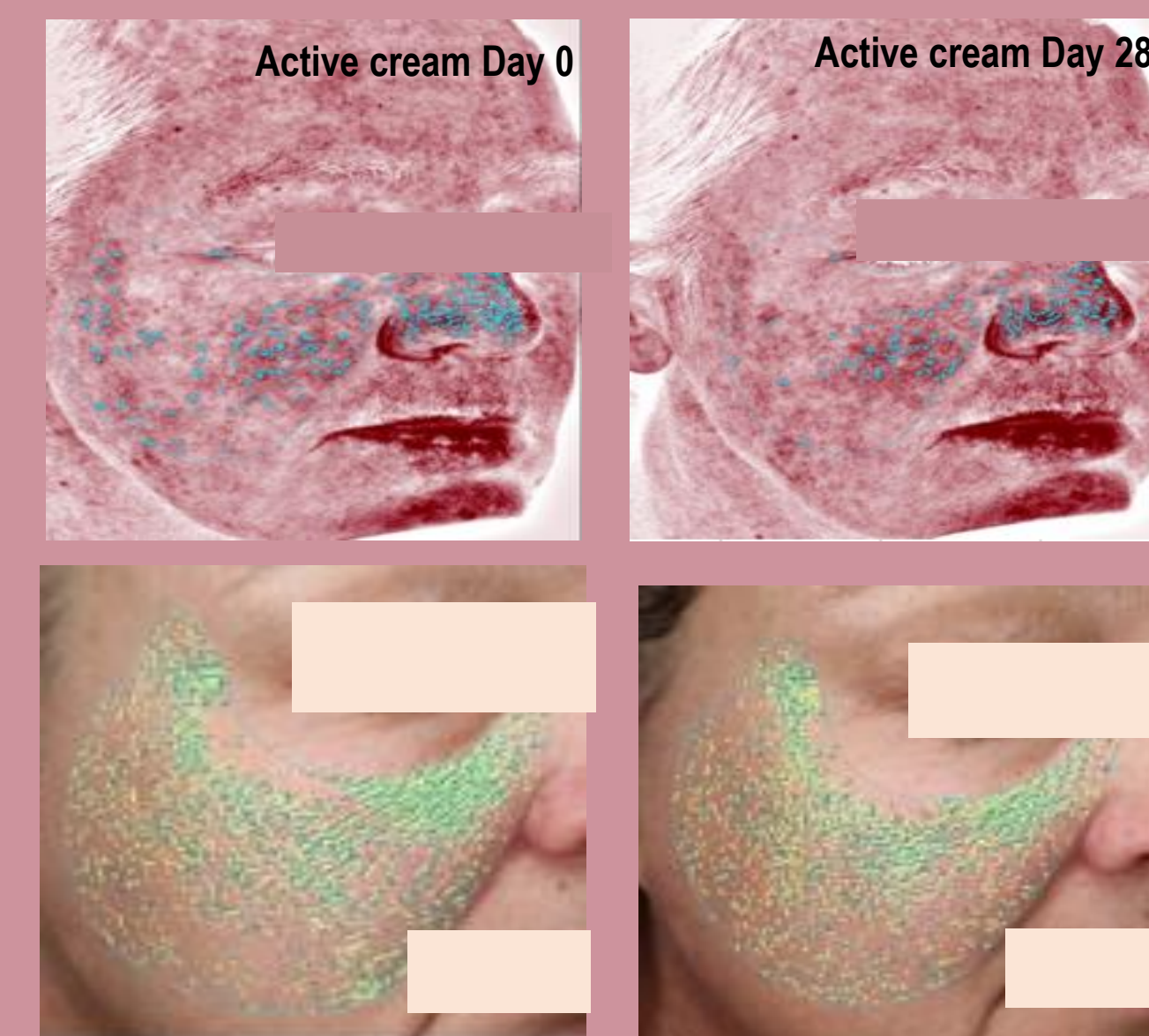


Figure 5. Instrumental analysis showed reduction in skin redness by 34% and improvement in skin texture by 7% after 4 weeks of active formulation usage.

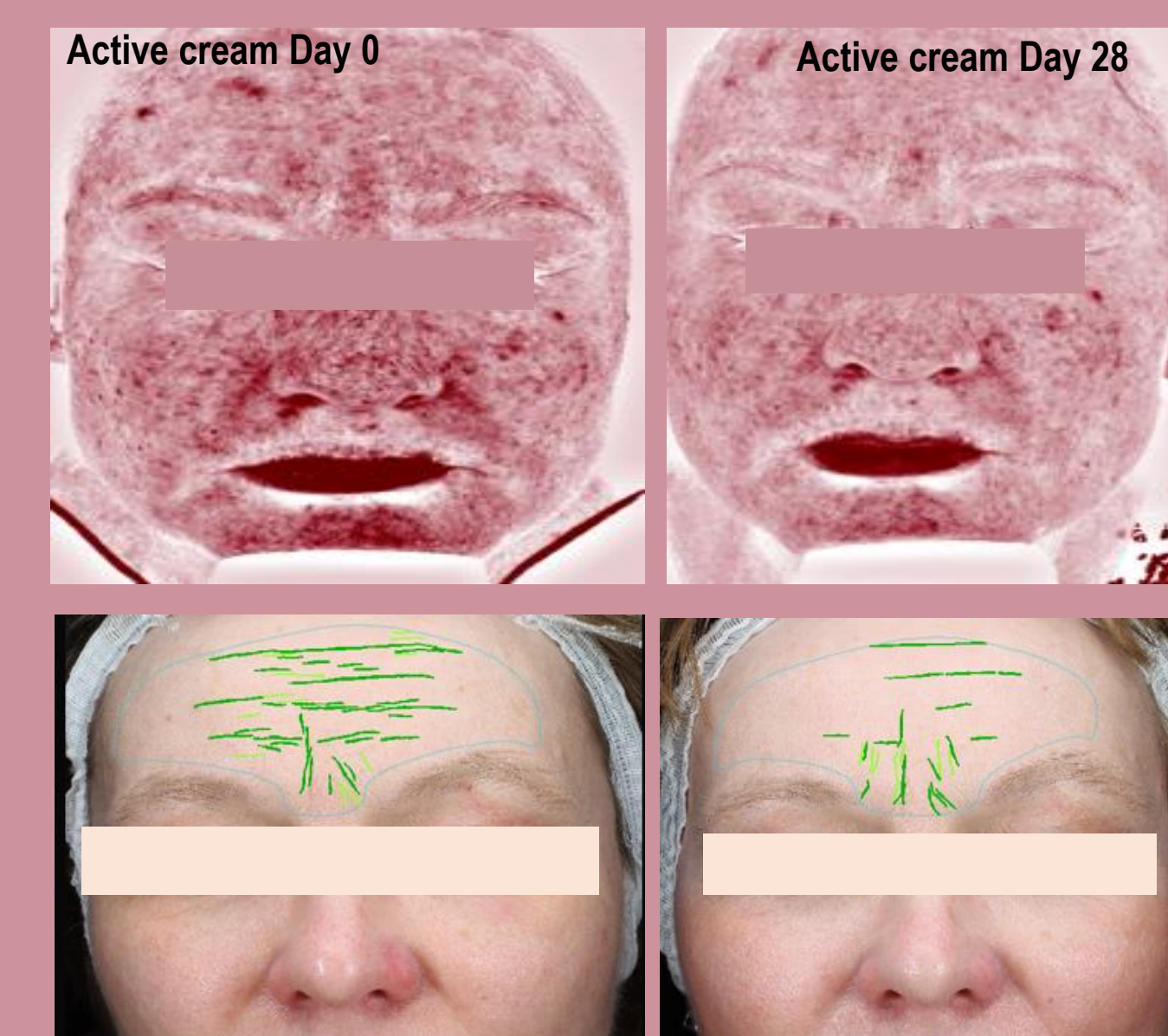


Figure 6. Instrumental analysis taken after 4 weeks of application of night cream 2812 showed decrease in number of wrinkles by 49% and reduction in number of dilated capillaries by 51%.

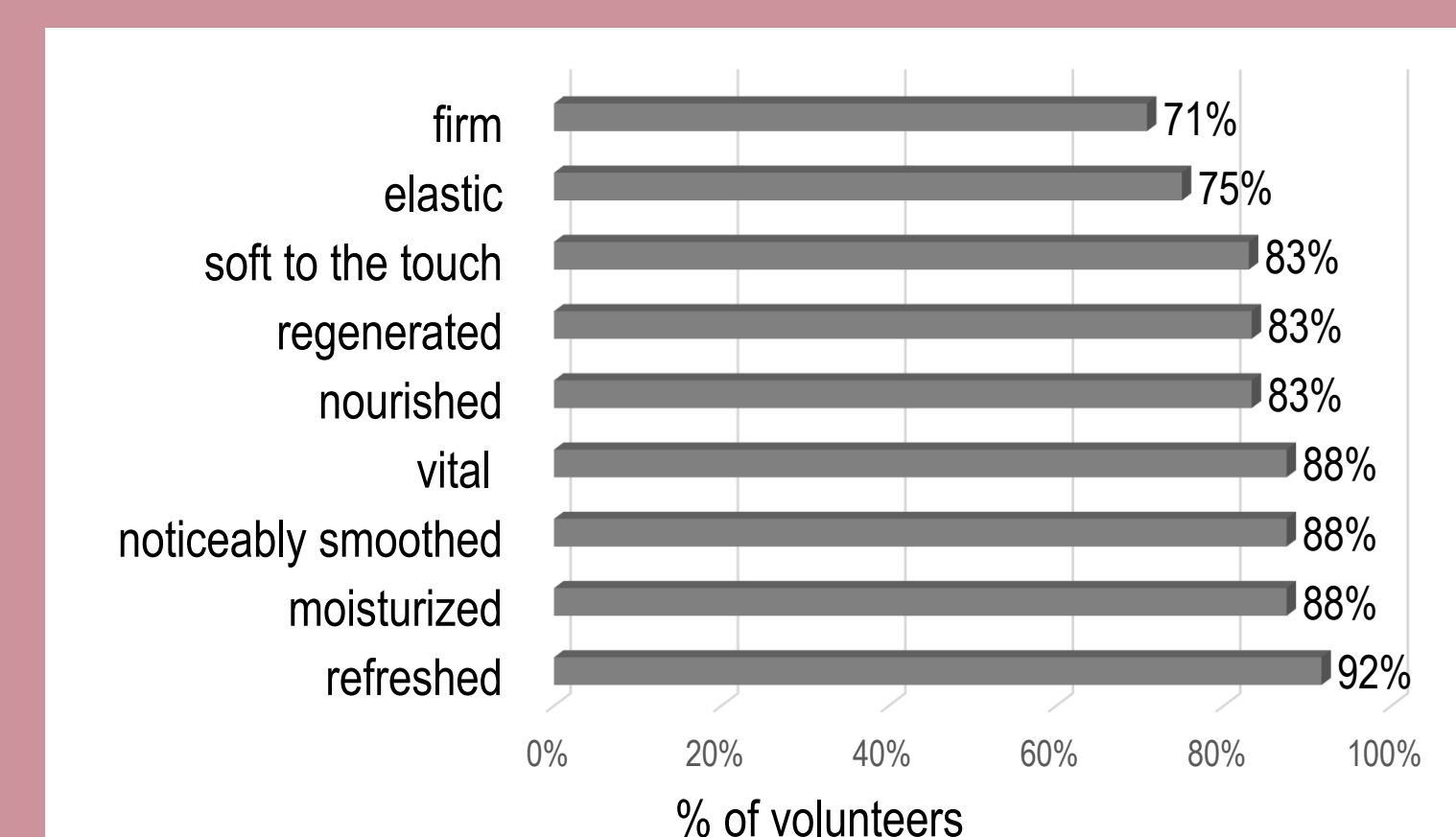


Figure 8. Volunteers self-evaluation of skin condition taken after one use of tested night cream 2812. Respondents noticed, that their skin become: refreshed (92%), moisturized, noticeably smoothed and vital (88%), nourished, regenerated and soft in tough (83%), elastic (75%) and firm (71%).

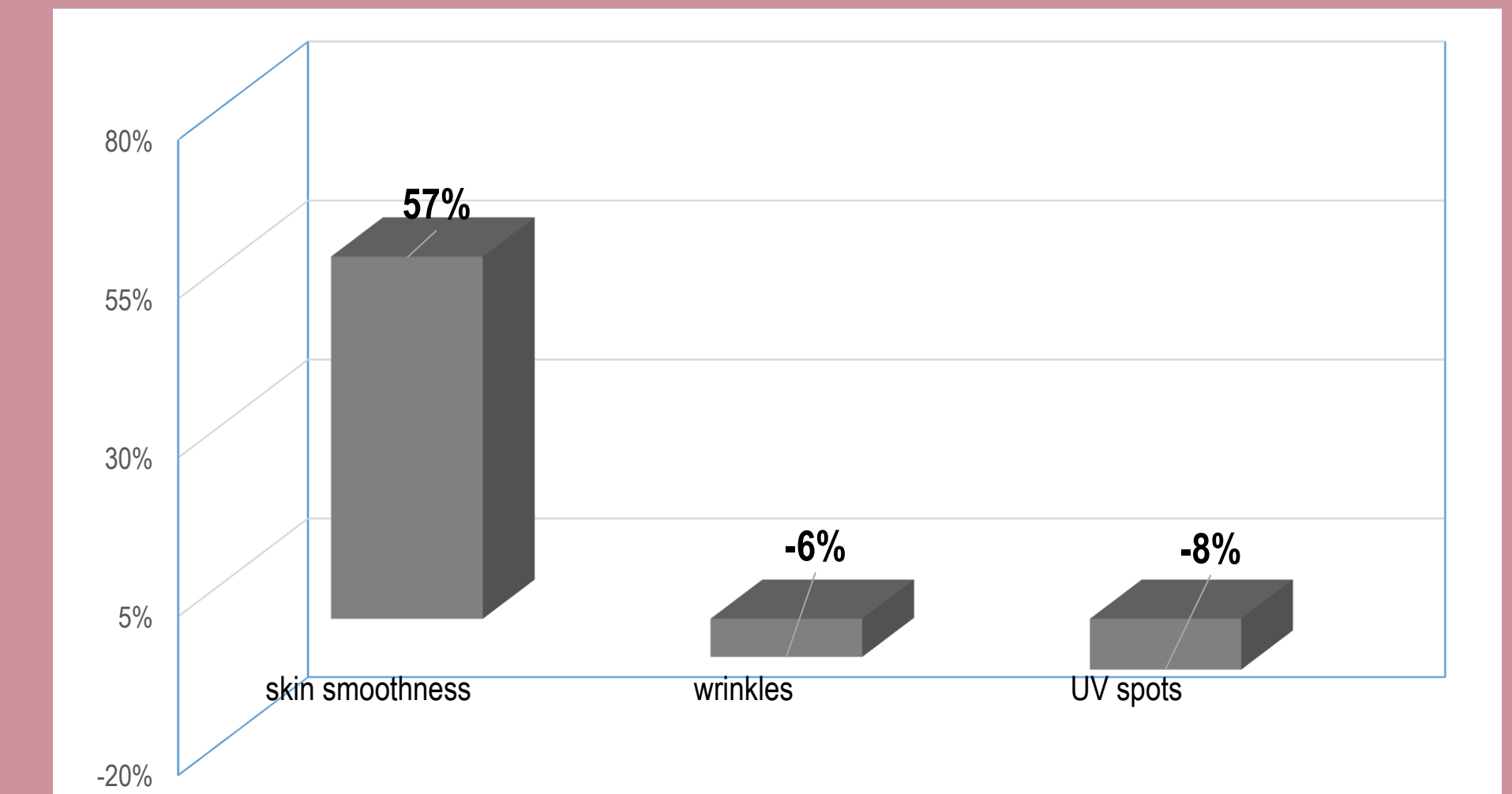


Figure 7. Instrumental skin analysis taken at baseline (before application) and after 4 weeks of using night cream 2812 showed an improvement in skin smoothness by 57% (Visioscan, Sesm), decrease in number of wrinkles by 6% (Visioscan, Sew) and UV spots intensity by 8% (Visia).

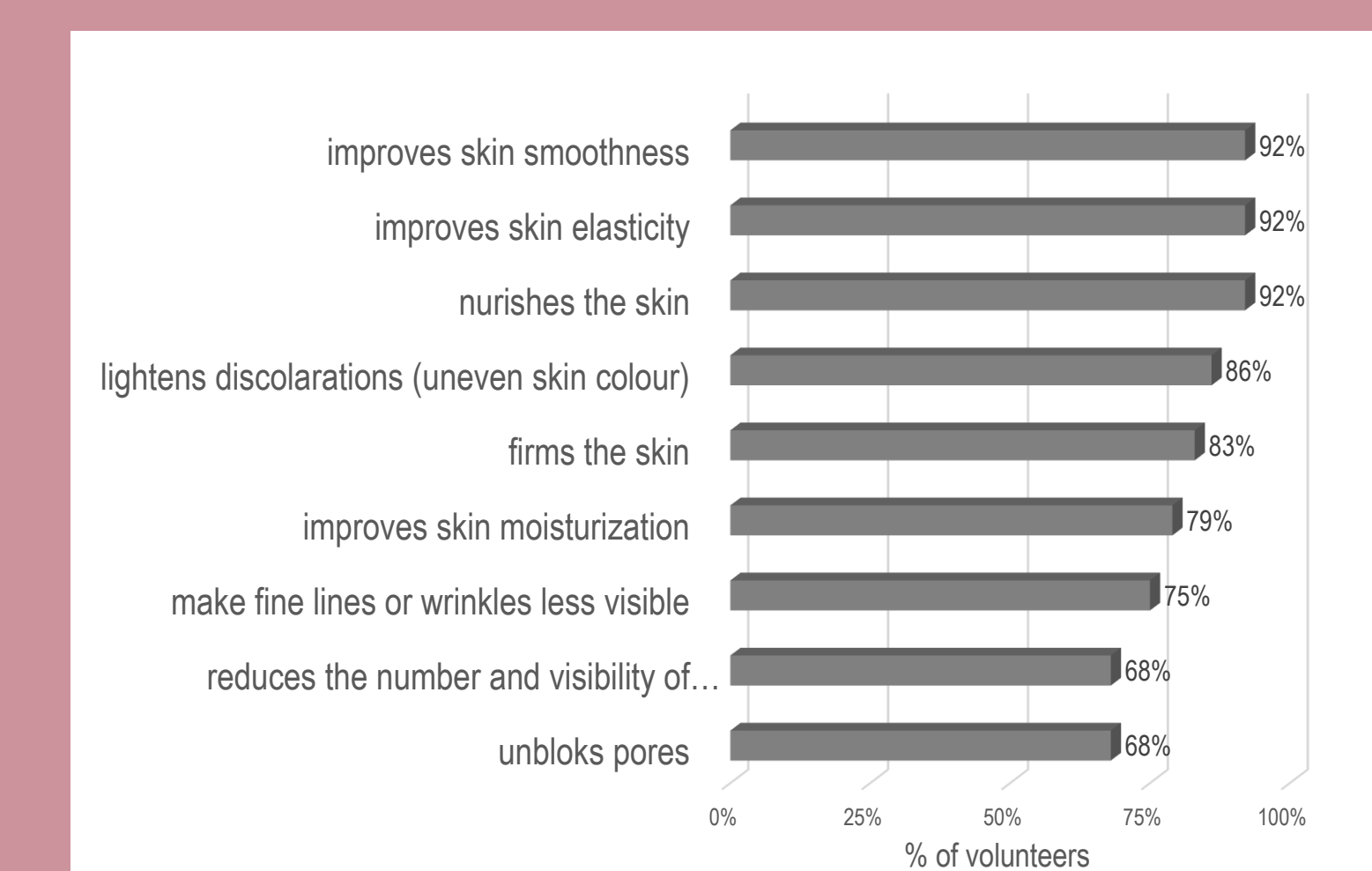


Figure 9. Volunteers self-evaluation taken after 4 weeks night cream usage. Respondents confirmed improvement in skin smoothness, elasticity and nourishment (92%). Skin become more firm (83%), fine lines and dilated pores become less visible (75% and 68%, respectively). Moreover skin moisturization increased (79%) and skin discoloration become less visible (86%)

### Group 2 – active formulation

## Conclusion

The tested product containing novel combination of active ingredients showed excellent properties in case of reduced number and volume of the wrinkles, skin discoloration (including UV spots and skin redness) and improvement in skin smoothness. It keep younger appearance of menopausal women and helped to improve skin condition caused by extrinsic and intrinsic factors of skin aging.