



COMBINING INSTRUMENTAL AND PERCEIVED EFFICACY: THE BOOSTER EFFECT MEASUREMENT OF A FACE SERUM

Alessia Costantini (1), Antonio Gion (1), Rima Al Sibai (2), Andrea Rizzo (2), Gianni Baratto (3); Alessandra Semenzato (4).

(1) Unired Srl, Padua, Italy; (2) Neutron S.p.A, Modena, Italy; (3) UNIFARCO S.p.A., Santa Giustina (BL), Italy; (4) Department of Pharmaceutical and Pharmacological Sciences, University of Padua, Italy.

INTRODUCTION

The instrumental measurements and the efficacy perceived by the consumers play a pivotal role in the evaluation of a cosmetic product. Usually, the perceived efficacy is evaluated using a *consumer test* which measures the overall satisfaction of a product in its sensory and performance characteristics, normally at the end of the test period.

We developed a new method, the Personal and Skin Efficacy Method (P.S.E.M.TM), which combines the instrumental measurement with a perceived-efficacy questionnaire able to measure the perception of the effects of the product on the skin at given times (2 or more).

In this way, the objective measures made with the instruments can be confirmed or not by the subjective evaluation.

The Personal and Skin Efficacy Method P.S.E.M.TM



The **perceived efficacy** was measured through an **online questionnaire**, developed using a 5-point Likert scale.

Questionnaire's items:

- ✓ Expression lines
- ✓ Wrinkles
- ✓ Redness
- ✓ Rough
- ✓ Spots
- ✓ Firm
- ✓ Dull complexion
- ✓ Hydrated
- ✓ Radiant
- ✓ Smooth
- ✓ Elastic
- ✓ Even

60 healthy Caucasian women (35-50 years old) divided into 2 groups:

Group 1: anti-ageing cream + anti-ageing serum for 6 weeks (in blind).

Group 2: anti-ageing cream + placebo for 6 weeks (in blind).



The **instrumental efficacy** was measured, only for group 1, through:

1. The Visia[®] Complexion Analysis, which captures high quality and standardized images of the face and allows the analysis of specific skin parameters. We evaluated the expression lines;
2. The TruSkin[®] Age Software, which gives an estimation of the apparent age of the skin respect to the chronological age. We compared the apparent age at T₀ with the apparent age at T₁.

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Global
evaluation:
anti-ageing cream +
serum
(Group 1)

The questionnaire highlighted that there is a statistically significant improvement (P = 95%) of the following item: radiant, firm, hydrated, even, smooth, expression lines, rough, elastic, dull complexion, redness.

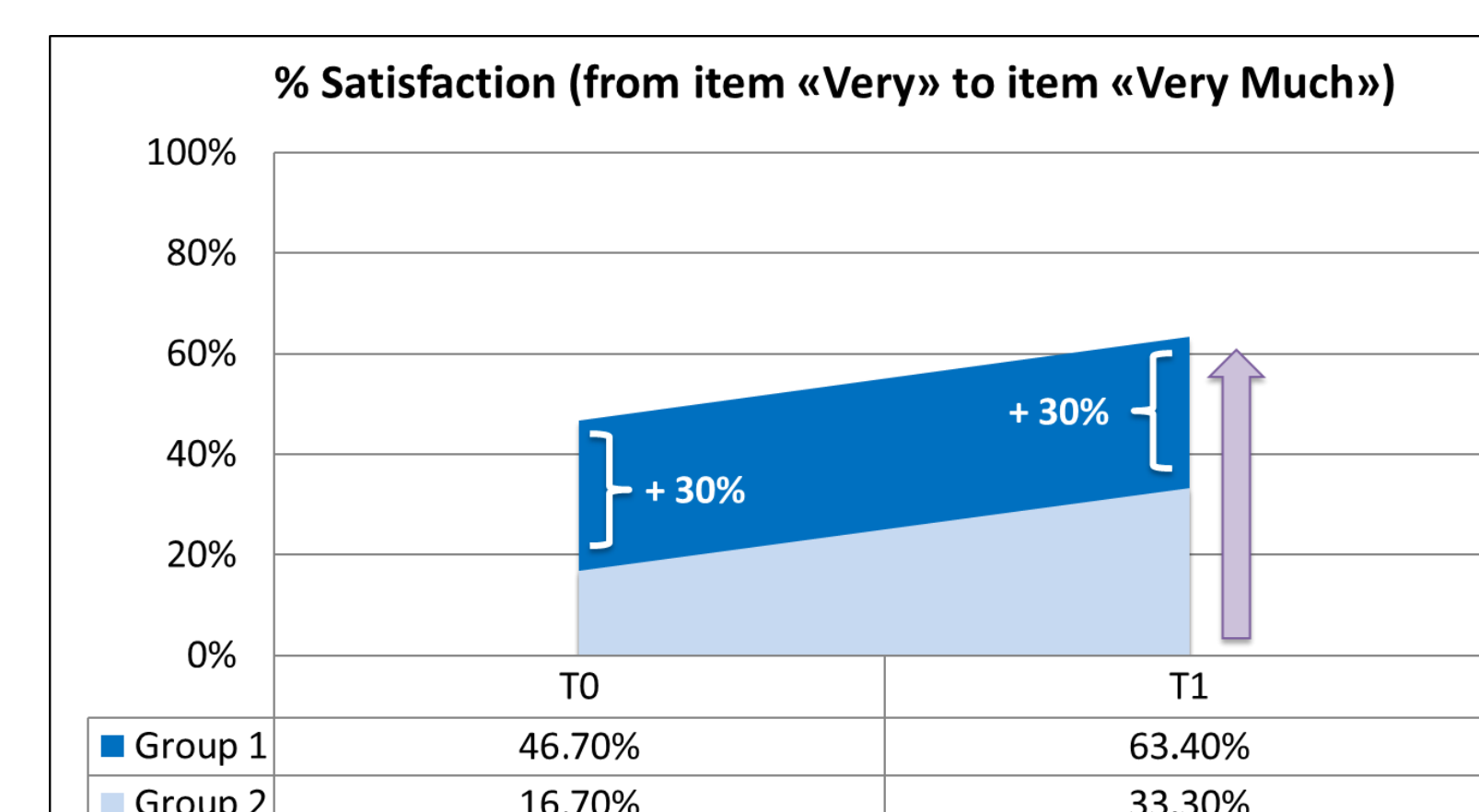
- 80% of the women present after 6 weeks of treatment a statistically significant improvement in expression lines (Visia[®]).
- 56% of the women show 3 years less than the real age (TruSkin[®]).

Booster
evaluation:
serum (Group 1) vs
placebo (Group 2)

The comparison between the results of the serum and the placebo obtained from the questionnaire highlighted, through the analysis of variance, the **booster effect of the serum in terms of improvement of the expression lines and the dull complexion.**

Satisfaction
evaluation:
serum (Group 1) vs
placebo (Group 2)

The questionnaire allowed measuring the overall satisfaction with the utilization of the anti-ageing serum and the placebo. As shown by the graph the satisfaction is about 30% higher with the anti-ageing serum compared to the placebo both at T₀ and T₁, even though an increase is observed for both products.



CONCLUSIONS

The P.S.E.M.TM method, which combines the questionnaire and the instrumental analysis:

1. Provides a precise and exhaustive description of the efficacy of a specific product such as an anti-ageing serum;
2. Extrapolates more adequately interpretable data than the only instrumental analysis.

Through the robustness of the instrumental data and the feelings relating to the experience of the use, the method proved to be a powerful tool for marketing to reach a wider and more complete communication of cosmetic products.

In this study, the P.S.E.M.TM method allowed an evaluation of the GLOBAL PERCEIVED ANTI-AGEING EFFICACY of the treatment and the BOOSTER EFFECT of the serum.