

COMPARATIVE STUDY ON ANTI-CELLULITE ACTION EMPLOYING MODERN OBJECTIVE ASSESSMENT TECHNIQUES

KOSMOSCIENCE Ciência e Tecnologia Cosmética LTDA.

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In this study, the aim was to develop appropriate and validated instruments in an innovative way in order to comparatively investigate the results of three types of anti-cellulite treatments currently in evidence: bioceramics-based fabric, manual lymphatic drainage, and application of a cosmetic cream containing active ingredients. Three objective and non invasive assessment techniques were employed: thermography, which was used to evaluate changes in the microcirculation of the skin; profilometry, which was employed to evaluate changes in the cutaneous relief; and anthropometric measures, which were performed with the aim to clarify the mechanisms of action, correlating changes in body measures with the action conferred by the treatments.

Materials and Methods

From the volunteers databank at Kosmoscience®, 24 individuals, aged from 20 to 45 years old, who had characteristics of normal skin, phototypes II and III according to the Fitzpatrick scale, and stage II gynoid lipodystrophy according to the Nurnberger-Muller scale, were selected. The volunteers were instructed to discontinue use of any cosmetics applied on test sites (buttocks and thighs) for 48 hours prior to the initiation of the test.

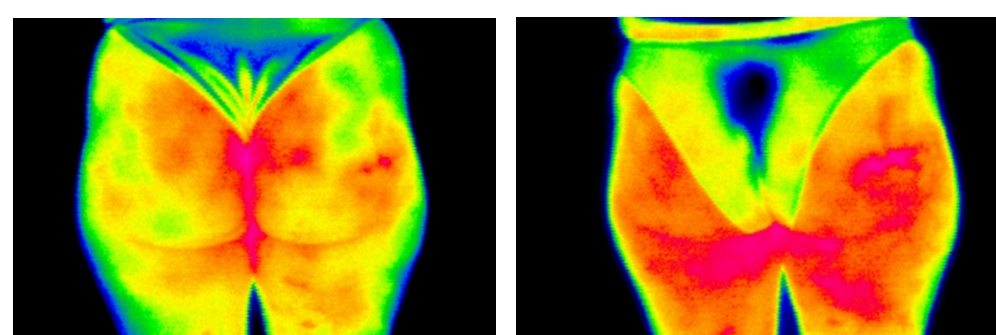
The volunteers were randomly divided into 3 study groups, with 8 subjects each: Lymphatic Drainage (D), Cosmetic Treatment (C), and Treatment with the Shorts containing Bioceramics (B).

Equipment used: Thermographic camera, Varioscans Compact 3012 Jenoptik; Digital camera, Kodak Dx6490.

Software used: Thermographic Analysis: ThermoView 1.0;

Photographic Image Analysis: Scion Image for Windows;

Statistical Analyses: GrandPad Prism4.03.



30 days later

Objectives

The present study is intended to evaluate, by means of objective techniques, the efficacy of the anti-cellulite treatment as related to the use of the "Invel Anti-Cellulite Shorts", the Manual Lymphatic Drainage technique, and the use of an Anti-Cellulite Cosmetic Cream, allowing for treatment periods of 30 days.

Conclusion

Subjective Clinical Assessment

Visually, the appearance of the skin showed significant improvement after 30 days as compared to the initial states for all three types of treatment, the anti-cellulite Shorts (B), the anti-cellulite cream (C), and the manual lymphatic drainage (D).

Subjective Assessment by the Volunteer

All volunteers subjectively reported improvement relative to the attributes: hydration, softness, fluid retention, reduction in body mass, skin imperfections and wrinkles, skin texture and firmness.

Objective Assessment by Computerized Thermography

All three treatments, the Anti-cellulite shorts (B), the Anti-cellulite cream (C), and the Manual lymphatic drainage (D) showed significant improvement as regards local blood microcirculation, which infers the reduction of fluids and metabolites, conferring improvement in the appearance of the skin.



Invel Anti-Cellulite Shorts

VS



Anti-cellulite cream

VS



Manual lymphatic drainage

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