

DEVELOPMENT OF AN ANTI-CELLULITE PELOID CONTAINING BENTONITE OF PORTO SANTO ISLAND, MADEIRA ARCHIPELAGO

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The relevant properties of bentonite and biogenic carbonate sand of Porto Santo Island, Madeira archipelago have been investigated in order to use these materials for therapeutic applications and topical use in local spas and Geomedicine centers. The aim of this work was to design an anti-cellulite peloid using bentonite (smectite rich clay) from Porto Santo and two plant extracts (Horse Chestnut Extract and Ivy Extract). The application of hot peloid causes the enlargement of pores facilitates the absorption of cosmetic ingredients to deeper layers of the epidermis is absorbent and moisturizing. Its use is recommended for initial treatment of lipodystrophies and slows down the development process of cellulite due to its ability to stimulate the venous and lymphatic circulation and its anti-inflammatory effect.

In this study, formulations containing 20% of bentonite <180 microns and 10% of plant extracts were prepared. Viscosity and texture analysis of the peloid, as well as the firmness and adhesiveness, were performed. The viscosity tests were performed in a rotating viscometer Brookfield DV-E (Germany).

To evaluate the effectiveness of the developed peloid, centimeter measurements and skin biometric techniques (with Multiprobe Adapter Systems MPA® from Courage & Khazaka) were used before and after peloid application on thigh and arm of human volunteers. After 20 minutes of hot peloid application an increase of skin hydration, a slight increase of skin pH and no skin irritation were observed at the application sites. The appropriate characteristics of consistency and adhesiveness and the results obtained in the centimeter measurements and biometric techniques suggest that the developed peloid has anti-cellulitis potential.

Keywords: peloid, bentonite, cellulite