

Development of Pelloids with Mineral-medicinal Water [†]

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Abstract: Products based on mineral-medicinal waters are appropriate for skin care, especially for sensitive skin and dermal disorders such as dermatitis, acne, and psoriasis. This work's objective was to characterize the mineral-medicinal water used in developing these products and to prepare mixed pelloids that present suitable characteristics for application to the skin. The mineral-medicinal water was obtained from the Thermal Complex of the city of Sáenz Peña (Chaco), and its composition was determined using analytical techniques to quantify the main ions, alkalinity, hardness, solid waste, and measurements of pH, conductivity, temperature, dissolved oxygen, dissolved solids, which will allow their classification. The development of formulations (F1 at F5) was proposed varying the concentrations of bentonite, kaolin, microcrystalline cellulose, and sodium carboxymethylcellulose. The formulations were evaluated for their organoleptic characteristics, physical stability, pH, conductivity, and extensibility. Mineral-medicinal water is classified as chlorinated, highly mineralized, and hypothermal water, with a high content of chloride, sulfate, sodium, calcium, and potassium. The formulations were acceptable, with differences in homogeneity and consistency; being F3 and F5 of better appearance and homogeneity, less consistency and better extensibility, pH 6-7 suitable for skin, high conductivity, and salinity. Physical stability at 60 days for formulations F3 and F5 was defined by the homogeneous appearance, pH, and consistency similar to the initial values. These properties are favorable indications for an improved formulation of cosmetic pelloids.

Keywords: chemical composition; thermal cosmetics; consistency; extensibility.

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Conflicts of Interest

The authors declare no conflict of interest.