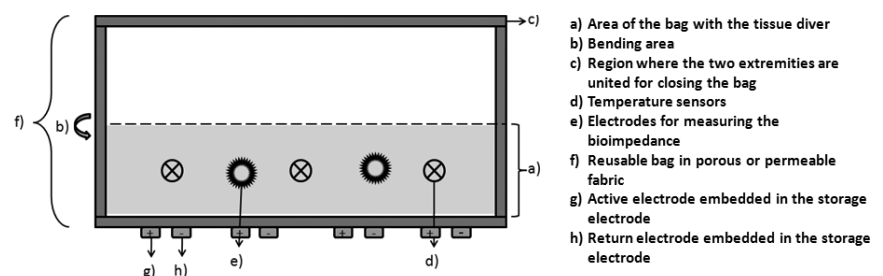


mudbag: heated electrode for applying treatment based on geomaterials alone or incorporated into dermoproducts (creams, ointments, lotions) and/or drugs

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Minerals have been used for therapeutic purposes since the beginning of mankind. Clay minerals have been the most used for this purpose, for pharmaceutical application or application in aesthetic medicine, due to their highly specific

surface, excellent rheological and/or adsorption/absorption capacity. Pelotherapy, or "Mudtherapy", is the use of mud/clay (both geological politic materials) for therapeutic applications, internal or external. Some Portuguese

geomaterials have been studied to analyze their suitability for medical treatments of hydrology. After adequate "ageing" preparation, called maturation, the mixture leads to production of mud/clay "peloids" whose characteristics will depend on the composition of mud/clay, geochemistry of mineral water, the mixture between the clay and water and, finally, the "maturation" process carried out. Thermal properties are a very important parameter for this application since good heat retention is wanted. Generally, the "peloid" is applied hot (30-40 °C) for 20 to 30 minutes in layers 1 to 2 cm, covered with a waterproof material to retain heat. The heat is conducted for through dermal and subcutaneous tissue and after 10 minutes it reaches the inside of the body, as far as

we know by conduction and convection via blood. This application produces a feeling of warmth in the area to be treated, vasodilatation, perspiration and respiratory and cardiac stimulation.

Studied technology refers to a medical device that functions as electrode in medical acts involving the use of electric currents, namely iontophoresis. This invention can be used in treatments in Thermal Centres, Thalassotherapy Centres, Medical Geological Centres, Spas, Physical Medicine Centres and Rehabilitation and Aesthetic clinics. The electrodes allow the passage of electric current through the skin and keep geomaterials and/or drugs to be applied at a constant temperature. The electrode

consists of two parts, the electrode storage that contains the product to be applied and the heating element. The electrode storage consists of assue driver that can take the form of a bag where are placed the formula with geomaterials and/or drugs.

The application of these geomaterials is yielded using this device because it maintains constant temperature during treatment, thus promoting greater therapeutic efficacy and reducing the time of treatment required for successful therapeutic action. On the other hand, adequate geomaterial allows a lower power consumption and appropriate temperature for a better rate of release of active principle.