

Kaolin Clay Research Paper

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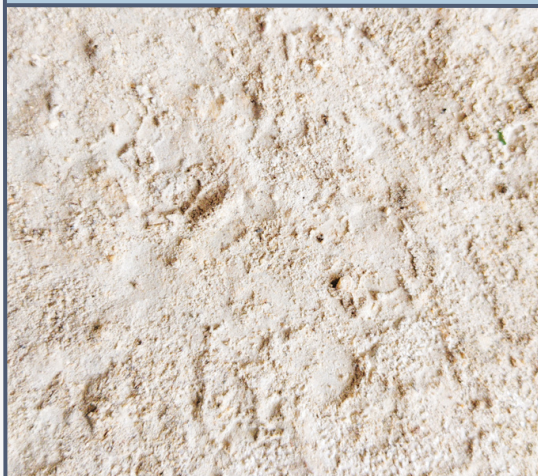


Kaolin Clay is a white clay that is used in both Three Ships' Detox and Soothe Clay Masks. Kaolin Clay is a great base clay that lightly draws out impurities from the skin. Clay minerals have been increasingly utilized in dermo-cosmetics and major advances have been achieved in the research and innovation related to these materials. Modern technology has been able to utilize the beneficial properties of clay in cosmeceuticals products such as facial creams, sunscreen, cleansers, shampoos and makeup items.

LIGHTLY DRAWS OUT IMPURITIES FROM THE SKIN

Kaolin Clay is made from very fine particles, offering a very large contact surface to their environment. They are made up of, more or less, hydrated aluminum silicates with a phylitic structure (piled layers) along with minerals from the parent rock.

There are many different types of clays, depending on the number and thickness of the layers, as well as the minerals contained. Kaolin Clay can be found in both Soothe and Detox. This clay is a great base clay that lightly draws out impurities from the skin, which is perfect for those with sensitive and dry skin.



The process of extracting Kaolin Clay is very simple. A mineral mine is created to dig up Kaolin. The clay is then water-washed and dried in the sun. The dried product is then sold as Kaolin Clay.

The exact process of extraction method for the Kaolin Clay that Three Ships sources is proprietary information.

WORKS AS A GREAT BASE IN CLAY MASK FORMULATIONS TO LIGHTLY DRAW OUT IMPURITIES

As mentioned, there are many different types of clays, depending on the number of and thickness of the layers, as well as the minerals contained. These layers are made up of sheets of silicon-oxygen tetrahedrons (SiO₄), and sheets of Aluminum Hydroxyl octahedrons (AlOH₆) linked together by the oxygen atoms and OH groups.

The most common clays are 1:1 type clays (one sheet of tetrahedrons and one sheet of octahedrons) and 2:1 types clays (two sheets of tetrahedrons and one sheet of octahedrons). White Kaolin Clay is a 1:1 type clay. Due to its structure, composed mainly of Kaolinite, it is less absorbing than other clays such as illite. Its white colour is due to rainfall which washes away from its minerals, including iron. White Kaolin Clay is perfect for sensitive skincare. It can also represent a mineral load in natural make-up products, for example.

SCIENTIFIC STUDY

Formulation and Evaluation of Clay Face Pack

One study formulated and evaluated the use of a clay mask on human skin. While the mask contained other ingredients (aloe, bentonite, rose petal powder, etc.), Kaolin Clay was incorporated at 5-40% as an active to absorb sebum and prevent pore-clogging. The mask did not show irritation and produced beneficial results with the ability to open pores and remove dead skin from the skin's surface.

Antibacterial Study on Clay Composites

Another study investigated the ability of kaolin and other clays to act as a carrier for antibiotics. Kaolin was an effective delivery vehicle for antibiotics against three common skin bacterial strains.

In this study, the kaolin clay was not found to have antibacterial activity, likely due to the lack of close contact between the clay and bacteria. Contrasting studies have shown that the negative surface charge of clays allow for it to exchange particles with the skin, including bacteria and toxins, thus drawing them from the skin.

Kaolin Clay works as a great base in clay mask formulations to lightly draw out impurities from the skin. It is a great option as a more gentle clay ingredient that is not as stripping or intense as other clay types. Kaolin Clay can be found in products such as the Three Ships Detox and Soothe Clay Masks.