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Rankstar Mountain, Brazil - basaltic rock. Clay deposit formation reminiscent.

850 MILLION YEARS TO FORM THE MOST POWERFUL CLAY FOR SKIN REJUVENATION

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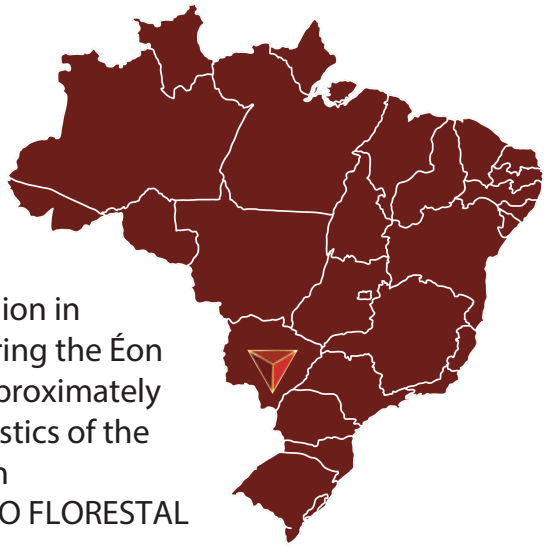
AQUIDAUANA, BRAZILIAN CERRADO



Located in the great Paraná Basin, which it comprehends a total area of 1.5 million square km, where 800,000 square KM are located in Brazil.
In addition to Brazil, it is part of Argentina, Paraguay and Uruguay, the region known worldwide for the existence of the Guarani Aquifer.
The geological formation and general structure of the region in which Brazilian Kimberlite Clay is found was triggered during the Éon Proterozoic and Phanerozoic, and their orogeny dates approximately 850 million years back (Godoy, 2007), featuring characteristics of the magmatic event in its Neoproterozoic granitoid formation (from 850 to 630 million years) of Cuiabá Group (CARBONO FLORESTAL GESTÃO AMBIENTAL, 2016).
In this place, million of years ago, huge traction tectonic forces caused cracking through which spilled lava to the surface, forming the largest basaltic flows in the world, with up to 300 m thick. In the lava flow process, large kimberlitic blocks of rock crust base were swept away. On cooling, these chunks were immersedin the surface.

During intemperism over the last millions of years, these rocks were transformed into residual and colluvial soil. Brazilian Kimberlite Clay is the result of sedimentation in wetlands of eroded sediments, as well as and basaltic and kimberlitic soils forming a specific mineral composition, rarely found on Earth, identified as the most powerful clay for use of beauty.

Brazilian Kimberlite Clay through its perennial moisture has the unique feature of the neutral / alkaline pH of the Guarani Aquifer.
The natural slow process of erosion is still active in the region, as it can be seen in the famous hills sighted in the area like this one in Mato Grosso do Sul.
The geochronological and mineralogical characteristics, along with a history of low regional occupation and difficult access to the areas, are factors responsible for the distinctive natural feature of the Cerrado biome.

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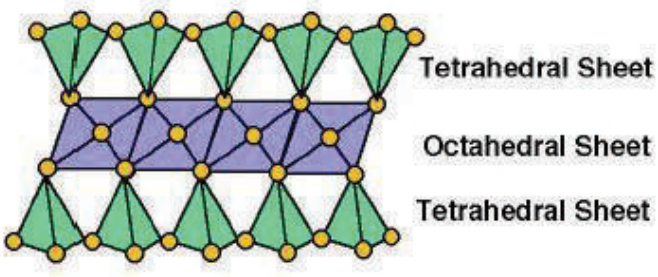
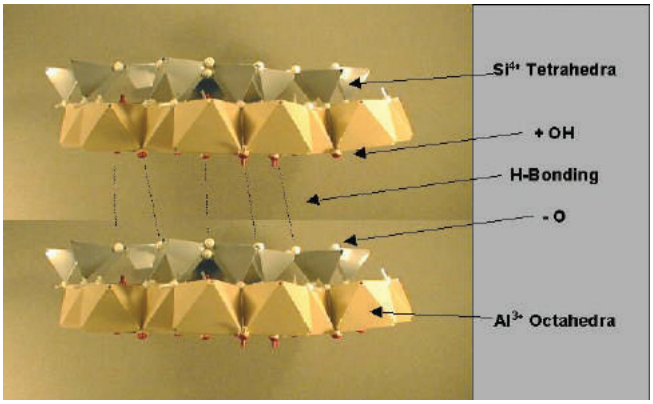
Atomic Composition Structure Crystalline Age at Fighting Toxins



Mineral crystals are atomic or molecular structures that are repeated three-dimensionally and are periodically formed through inorganic geological processes. They are the purest manifestation of energy and light on the physical level.

The crystal structure of Kimberlite Clay consists of an octahedral layer sandwiched between two tetrahedral layers.

The crystalline tetrahedral structure provides the generation of electric currents as it generates piezoelectric effect by inducing an electromagnetic field to 90 degrees Celsius. When interacting with the skin layers through ion exchange it promotes the disarmament of existing toxins rearranging the electron layer. The result is skin with less toxins.



PIEZOELECTRICLY EFFECT

These currents are piezoelectricly originated in the tetrahedral structure of clay. They are similar to the currents produced by Pyramid stones of Saqqara, Egypt, through the Earth's rotation. Saqqara is the arch monument to knowledge of energy manipulation in the physical world.

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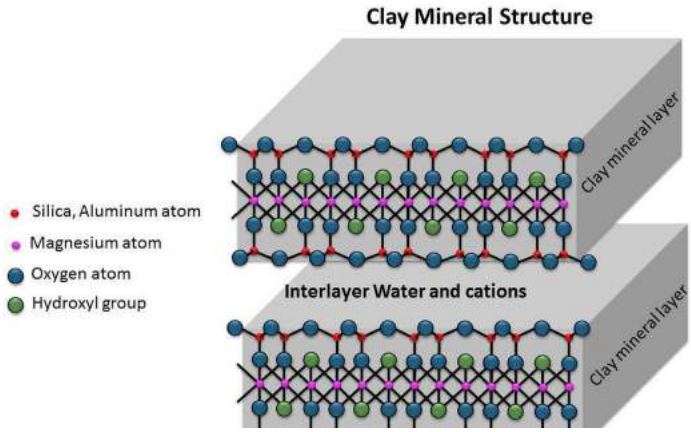
Shutdown Process of Toxins by Clay

The links between the ions inside the blades are strong. However, the links of the sheets together are weaker, facilitating the exchange of electrons of the clay with the body, therefore disablingthe toxins in the body. This phenomenon occurs by the action of the ions when the clay is moisturized.



The clay absorbs copper, zinc, cadmium, lead, mercury, and many other minerals.
Metal toxins give electrons to non-metal components, semimetals and hydrogen clays.

ACTION OF HEAVY METALS IN THE BODY

The two main mechanisms of heavy metals in the body are:
- Formation of compounds of working groups of enzymes that affects the proper functioning of the body;
- Combining with cell membranes, which disturbs or even completely prevents the transport of essential elements such as ions Na + and K +. These substances participate in the neuronal communication process. Due to the high permeability of the placenta, the fetus also suffers all the consequences of heavy metal poisoning.

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Mineralogical Composition

The clay composition process is made possible by very small crystalline particles, which can consist of a single mineral or a limited number of minerals known as clay - usually composed of hydrated silicates of aluminum, magnesium and iron while, in most cases, also containing a certain amount of alkali and alkaline earth elements.

Utilizing X-ray diffraction and scanning electron microscope (SEM), the mineralogical analysis of Brazilian Kimberlite Clay reveals a large variety of **clay minerals**, such as **boron, zinc, phosphorus, copper, sulfur, sodium, manganese**, potassium, calcium, magnesium, aluminium, silicon, etc., far beyond that of any known clay, which helps the fundamental skin reactions, allowing this material full of cosmetic properties.

Special characteristics of this clay can also be found by more complex techniques, e.g. chemical analysis, cation exchange, X-ray diffraction, thermal analysis, infrared spectroscopy, transmission electron microscopy (to determine the morphology of particles of clay), or scanning (to determine the texture of natural aggregates of clay minerals before or after any industrial processing).

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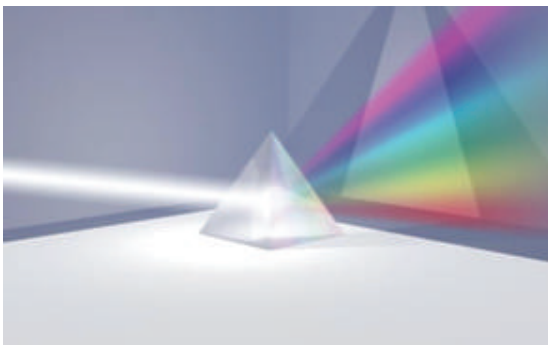
Effect on Central Nervous System and DNA

The clay refractive properties make it decompose in sunlight spectrum frequencies compatible with the DNA and brain wave frequencies. This makes it possible for the clay to interact with the central nervous system including emotional states.



REFRACTION OF LIGHT BY CLAY

Existing elements in different crystalline types of clay energy manifested in several forms, such as piezoelectricity, light, pressure and heat, reaching its spectrum in the frequency of waves identified in electroencephalograms. These energies interfere with the human body by changing its vibrational patterns, which gives these energies specific properties for use in various therapies.
The refraction of light characterizes each element through its refractive index (RI). The passage of light through different densities, such as air and crystal, changes its speed and causes a deviation in its trajectory by changing its vibrational frequency. As a consequence of the different types of clay, the respective elements within the clay act as energy vehicles in the human body restoring dynamic balance and healthy functionality. (CREA, 1992; SCHUMANN, 1995)

BIOPHOTONIC EFFECTS

The mineral crystals also interact with light causing refraction while emitting photons (quantum units of light particles) that act on human tissue. The refracted light has its wave frequency changed resulting in several colors that produce bio-photonic effects (light interference in the cells of living beings which restore the energy balance. Mandel (1998) cites that bio-photonics is a language used by cells regulating all body functions. (ARRIETA, 2006; CAPRA, 2003; MANDEL, 1998; PAGNAMENTA, 1998)

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Effect on Central Nervous System and DNA

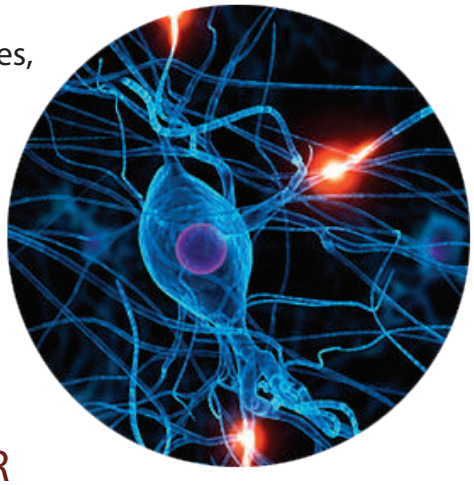
CHANGE IN CHEMICAL METABOLISM

The emission of energy waves can be used to restore the human oscillatory vibrational balance by achieving resonance with the frequency of cells. Such stimuli act on the central nervous system and emotions (CREA, 1992). Crystalline elements emit electromagnetic energy harmonizing the electrochemical patterns of human beings. The contact of the crystalline minerals with one's skin results in chemical changes in human metabolism. (JOHAR, 1993).

When color is applied at certain points of the skin, there will be a resonant frequency which will stimulate the production of various hormones. Upon receiving this stimulus, the body can return to an energy balance restoring the functions of the body corresponding to the point stimulated. Living cells emit light radiation bio-photons, which contain their own bioelectric characteristics. (MANDEL, 1998; PÉREZ; GÓMEZ, 2001; PAGNAMENTA, 1998; YAMAMURA, 2001).

CLAY INTERACTION WITH DNA

In experiments conducted by the Russian Academy of Sciences, it was found that DNA molecules emit photons as they also interact with photons emitted at resonant frequencies. These frequencies can be issued by therefraction of light made by the clay.
The photonic activity of DNA is also described by the activity in the range of brain wave frequencies. Therefore, the use of clay, and its refractive photonic ability, can act in a resonant way with the central nervous system and emotional states.



INFLUENCE ON INTERNAL STRUCTURE: WATER

The mechanism of light, through its electromagnetic field, operates in various physiological processes within humans beings. This interference is based on the fact that different frequencies of light produce colors of the visible spectrum that influence the internal structure of water, the main component of the human body which thus effects the cells. (RADELJAK et al, 2008).

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Light Spectrum Frequency Effects on the Body

According to Amber (1992), colors are used to change or maintain the body's vibrations at a frequency which results in well-being as the bodies have healthy frequencies for proper functioning. Diseases occur due to changes in these frequencies.

MICROBIAL EFFECTS AND EFFECTS AGAINST SOLAR RADIATION

Considering the energy theory, the clay is used to revitalize the body through the energy from the sunlight.
The clay is terrestrial, magnetic and intrinsic, so that there is thermal and osmotic equilibrium and when deprived of oxygen germs that have antimicrobial action.
Furthermore, it is observed that clay reduces the effects of solar radiation. (MEDEIROS, 2007; NEVES, 2010).

NON INVASIVE BODY ACTION

Because of these various properties - refractive index, bio-photonics, crystal structure and frequencies of colors - the medicinal effects of clay are effective and diversified.
Even without exchange of chemical elements between the clay and the skin, these properties allow stimulus of the respective elements already available in the human body, activating them or encouraging them to ion exchange, favoring the energy balance. (BOMTEMPO, 2000; DEXTREIT; 1997; JAVIER, 1995).

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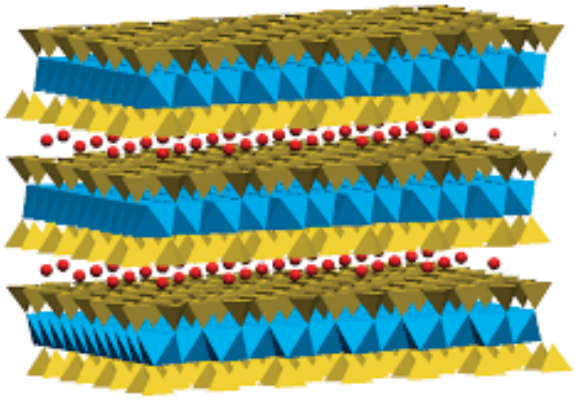
Cellular Stimulation

THE CHEMICAL, PHYSICAL AND RADIONICS PROPERTIES OF BRAZILIAN KIMBERLITE CLAY ALLOW CELL STIMULATION

The clay's chemical capacity allows for the possibility of chemical reactions with other compositions. The clay contains high-grade plastic and colloidal properties, as well as large variations in its physical properties, e.g. transformation into nanocomposites.

The radionics capacity refers to the range of frequencies emitted by the crystalline structure of minerals within the clay, enhanced by photonic diffraction and cation exchange.

A high rate of cation exchange (above 130) has been identified in Brazilian Kimberlite Clay.
This cation exchange capacity, which quantifies the number of exchangeable interlayer tetrahedron / octahedron cations in the chemical process of modification of organic or inorganic ions, acts directly on organophilization by ion exchange of interlayer cations for organic cations, mainly surfactants, and pillarization, as it has swelling properties and ion exchange. Both are essential to this process.



Between the clay's structural layers are water molecules with oriented and regular arrangements.
They coordinate exchangeable cations and indicate that the water molecules are interacting by hydrogen bonds, which provides organization within the lamellae.

The exchangeable cations control water adsorption in low amounts on the surface of clay. Nanocomposites can be obtained with a high degree of clay dispersion in the matrix and have good mechanical properties at relatively low loading levels because of the affinity between water and clay and through an unprecedented process called dynamic coagulation.

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Benefit of Cosmetic Applications

CELL STIMULATION PROPETY

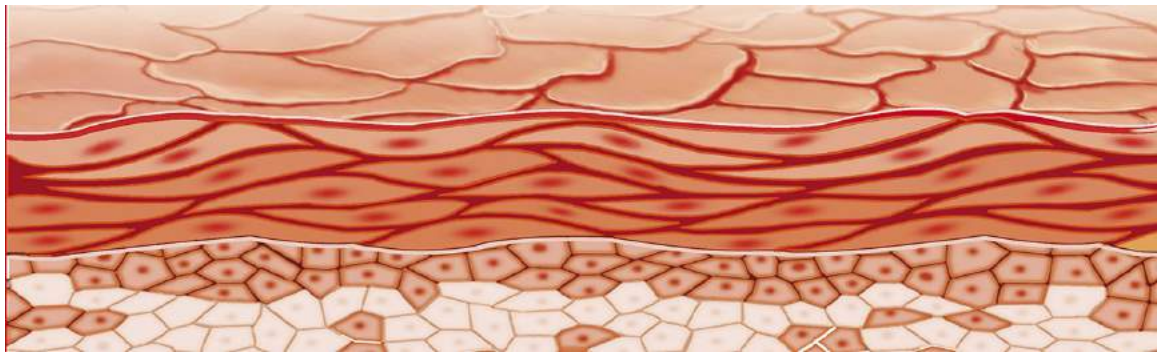
Due to the synergy of stimulus attributes noted above, the use of Brazilian Kimberlite Clay creams allows rejuvenation of the tissue, resulting in cell regeneration.

DETOX PROPERTIES

Thanks to its unique mineralogical composition, the use of Brazilian Kimberlite Clay in cosmetics naturally provides antioxidant capacity to the skin, acting in the disarmament of existing toxins by its adsorption mechanism. It it retards the aging cells and increases resistance to fight the attack of oxidizing agents.

NORMALIZING PROPERTIES

This clay is used to adjust rheological properties and to stabilize emulsions and suspensions. When it is part of the cosmetic industrial formulation, which generally includes surfactant molecules, perfumes, and antioxidants, among others, it is expected that the clay undergoes some type of chemical modification - especially when it is a liquid or pasty product in which the clay is in suspension.
Brazilian Kimberlite Clay is used to stabilize oil emulsions in water in creamy products. Its role is to remain as a protector between the two emulsion phases. It is used as a rheological agent in this type of emulsion, mainly because it can be wet by both liquid phases. It acts as a physical barrier by preventing the coalescence of liquid emulsion drops and by stopping phases from separating.



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Benefit of Cosmetic Applications

EFFECT OF PLASTICITY AND QUANTUM PROPERTIES

Because of its large surface area, more atoms are found on the surface of the clay. These surface atoms do not have their charges compensated, therefore they are more reactive than those below the surface. First, it causes the materials, which are inert in macroscale, to become reactive at nanoscale, affecting the material's resistance and electrical properties. These characteristics are very desirable for use as catalysts, for instance. Second, within these dimensions, quantum effects begin to dominate the material behavior, affecting its optical, electrical and magnetic properties.

POTENTIAL COSMETIC APPLICATION

Brazilian Kimberlite Clay is part of a group called special clays, which have more than 130 applications in specific cataloged materials.

Brazilian Kimberlite Clay can be used at nano-scale with hybrid polymer-clay nanocomposites as an organic reinforcing coating agent that increases its mechanical, electrical and thermal properties.

Owing to its high cation exchange capacity properties arising from isomorphic substitution combined with their structural characteristics of easing interleaving a large number of organic and inorganic compounds, allowing obtaining products tailored for a large number of industrial uses, more than the other types of combined industrial clays, it is extremely versatile and a suitable material for obtaining cosmetic products or high added-value inputs.

SURFACE ACTIVE CAPACITY

Clay action in suspension reduces the surface tension of other chemical suspensions on contact, facilitating the cation exchange.

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Benefit of Cosmetic Applications

POROSITY PROPERTY OF CLAY ALLOWS ENDLESS COSMETIC APPLICATIONS

The alternate clay forms a new class of materials which can be obtained by a homogeneous distribution of pores and open pores ranging from 4 to 18 Å. This allows the adsorption of molecules ranging in various sizes.
There are reports in the literature on previous physical treatment in natural clays aimed at enriching the sample in the clay fraction to a more effective result in the adsorption of the solution.

OTHER APPLICATIONS - PHARMACEUTICALS

There are many pharmaceutical products on the market that use clays in their formulation as excipients. In Brazil, there are examples of patents protecting the manufacture of ophthalmic drugs and dermal adhesives in which the clays are applied as their main active ingredient.

It is important to remember that there are some important requirements for clay to be used in pharmaceutical and cosmetic preparations; in particular the particle size, the degree of mineral purity, the amount of adsorbed water, along with existing chemical and microbiological contamination. Among the phyllosilicates, only certain types of clay such as Brazilian Kimberlite may be used in cosmetic applications.

Brazilian Kimberlite clay is a natural resource that has adjustable physicochemical and radionic properties, allowing its use in the manufacture of various types of products that require its specific material characteristics.
It allows the chemical modification of the surface of the individual clay l amellae, achieved in cation exchange procedures, resulting in hydrophilic or hydrophobic materials which have controlled structural characteristics.

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Clay Colors and its Properties

RED CLAY

The main elements in red clay, along with their crystal structures are: magnesium oxide (MgO) - HC; Sodium (Na) - CCC; iron oxide (Fe2O3) - CCC; copper oxide (CuO) - CFC; potassium oxide (K2O) - CCC; iron (Fe) - CCC; copper (Cu) CFC - and chromium (Cr) - CCC.
(HENKE, 2012; Gopinath et al. 2003; Sampaio, 2008; STARIOLO, 2009).

The red clay is a noble one due to its efficient action in skin rejuvenation:
- Stimulates blood circulation.
- Speeds up metabolism, stimulating less active people.
- Stimulates the effect of drainage and oxygenation of the skin, specifically in cases of lesions such as papules, blisters, pustules and skin flaking due to detoxification.
- Rejuvenating masks. It softens lines of expressions and increases the glow of skin.
- Reduces measurements by stimulating body fluid movement, helping to accelerate drainage.

WHITE CLAY

The elements present in white clay, along with their crystalline structures include: aluminum (Al) - CFC; magnesium oxide (MgO) - HC; calcium oxide (CaO) CFC -; sulfur (S) - orthorhombic; iron (Fe) - CCC; boron (B) - rhombohedral; Potassium (K) - CCC; Calcium (Ca ++) - CFC; Silicon (Si) - cubic; and sulfur oxide (SO3) - orthorhombic.
(HENKE, 2012; Gopinath et al., 2003; Sampaio, 2008; STARIOLO, 2009).

White clay is a soft type of clay that is used with other types of clay to mitigate their effects, resulting in smoother energy intensity.
It is the most used clay color for synergy, reducing the intensity of the therapeutic effects of other clays as a result of its plasticity and vibrational stimulus action on the skin.
(HAUCK, 2011; MEDEIROS 2013).
- Contains silicon oxide, which stimulates the skin to produce collagen and elastin.
- Cleanser effect, purifying, decongestant, smooth tensor and revitalizing.
- Assists in blood supply, oxygenates and nourishes the skin. (Peretto, 1999; TUROVELSKY, 2005).
- Smooths out wrinkles, expression lines and spots caused by overexposure to the sun.

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BLACK CLAY

The elements present in black clay, along with their crystalline structures include: aluminum (Al) - CFC; titanium (Ti) - HC, magnesium (Mg) - HC; zinc (Zi) - HC; iron (Fe) - CCC and sulfur (S) - orthorhombic.
(HENKE, 2012; Gopinath et al., 2003; Sampaio, 2008; STARIOLO, 2009).

Black clay has an apparent greasy texture, so water should be added gradually to allow it to dilute more easily. It has astringent effects and activates blood circulation. Moreover, it exhibits anti-inflammatory properties, with decongestant, healing, and antiseptic effects (WERNER, 2013). It has skin rejuvenation effect.

GREY CLAY

The elements present in grey clay, along with their crystalline structures include: silica (Si) - cubic and zinc oxide (ZnO) - HC.
Properties of gray clay:
- Widely used in detoxifying massages in order to maintain system in balance.
- Astringent effect (oily skin controller).
- Gentle exfoliator; produces a soothing action and is suitable for acne-prone skin treatments.
(Peretto, 1999; MEDEIROS, 20O7; CLAUDINO, 2010; VILA Y CAMPANYA, 2000; HAUCK, 2011; DOCUMENTATION IN REGULAR PROFESSIONAL AESTHETICS, 2004).

Grey clay is used in hair treatments to control seborrhea. It has a decongestant effect and aids in skin restoration (HUARD, 2007).
Helps fight free radicals and arthritis, assists with the functioning of the pancreas and thyroid, and aids in countering male and female reproductive system disorders. (MEDEIROS, 2013; VILA Y CAMPANYA, 2000).

PINK CLAY

The elements present in pink clay, along with their crystalline structures include: III ferrous oxide (Fe2O3) - CCC; Sodium (Na) - CCC and copper oxide (Cu2O) - CFCs.

Its effects on human physiology have been described above in red clay.
(HENKE, 2012; Gopinath et al. 2003; STARIOLO, 2009).

This rose-shaded clay is a mixture of white and red clays. It tones the skin, promotes elasticity, and enhances skin radiance and smoothness. It is also emollient, soothing and antioxidant.
(MEDEIROS, 2013).

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Cosmetic Applications

PRODUCT NAME	PRESENTATION	pH	DOSAGE
Brazilian Red Kimberlite Clay	Powder	5	from 2%

DETOX CLARIFYING FACE CLAY MASK

This face mask is ready to use. It does not dry during application as its formula is rich in omegas. In just 15 minutes the skin is lighter, smoother, brighter, firmer and younger. It promotes blood circulation, toxin elimination, hydration and rejuvenation. Apply over clean face for 15 minutes. Rinse. Use up to 4 x week. In case of disconfort, rinse well, avoid usage. For all skin types.
Brazilian Kimberlite Clay Dosage of Use: 20%

SLIM K BODY MASK - GOOD SHAPE CLAY

Body clay mask. Efficient action against local fat and cellulite. Improves skin firmness.
Contains natural organic ingredients, enzymes and cellular messengers combined with Brazilian Kimberlite Clay to stimulate and detox the skin,. Fights cellulite, flaccid and reduce fat.
Leave for 20 minutes and rinse. Noticeable results after the first application.
Appy up to 4 times a week to reduce measurements in fat accumulation area.
Brazilian Kimberlite Clay Dosage of Use: 12%

SLIM K BODY MASK - GOOD SHAPE CLAY - PROFESSIONAL USAGE

Special package for professional use. Suitable for post cosmetic procedures (manual or mechanical treatments). Final treatment step. Leave for 30 minutes and remove with wet sponge.
Bandage can be used for up to 3 hours. Easy to rinse. Do not reuse bandage due to toxins realesed by the body.
Brazilian Kimberlite Clay Dosage of Use: 12%

FACIAL SÉRUM VITAMIN C WITH CLAY

It combines the best organic ingredients to immediately change the skin: vitamin C 20%, hialuronic acid and ferulic acid, associated with Brazilian Kimberlite Red Clay.
Attenuates expression lines, spots, promotes firmer and smooth skin . Detox Effect.
For all skin types. Apply over clean face, morning and night, under your moisturizer or sunscreen.
Brazilian Kimberlite Clay Dosage of Use: 2%

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clay

Enviromental Policies

Brazilian Kimberlite Clay extraction process follows rigorous
enviromental control and Zero Carbon Compensation.
We are supported by specialized companies to guarantee special soil treatment.

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