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Exfo-amber

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Exfoliating



Exfo-amber

INTRODUCTION

EXFO-AMBER is fossilized resin coming from forests of *Pinus succinifera*, ground to a particle size smaller than 400 µm. This plant product has been developed as a physical exfoliant agent to accelerate skin desquamation and therefore improve skin appearance.

DESCRIPTION

SKIN EXFOLIATION

The horny layer is the outermost surface of the skin. Besides its biological barrier function, it is also very important from the esthetical point of view. The properties of the horny layer influence the skin appearance, by controlling factors such as texture, light reflection and color.

The horny layer undergoes continual natural exfoliation, due to cell (corneocytes) renewal. This process maintains the uniformity of skin properties. However, if the cell turnover is altered or slowed-down, because of aging or environmental climatic damage, the skin texture becomes deteriorated, leading to increased roughness and thickness of the horny layer.



Cosmetic solutions to this problem include skin exfoliation methods. Exfoliation erases layers of dead cells and impurities on the skin, thus regulating the thickness of the horny layer and providing better cell oxygenation. The outcome is a smooth, polished, impurities-free, bright and luminous skin.

TYPES OF EXFOLIATION

Exfoliation may be chemical or physical, depending on the exfoliant agent used. Chemical exfoliation consists of applying substances on the skin, which attack the cell junctions in the horny layer, by means of enzymatic mechanisms or acidic pH. Conversely, physical exfoliation is based on particles that mechanically detach dead cells.

EXFO-AMBER is a natural plant exfoliant used to carry out a superficial physical action on the skin.

BOTANY AND CHEMISTRY

AMBER IN THE NATURE



Amber is the only vegetable precious stone. Like pearls and coral, amber is included in the group of organic gems.

Amber has originated some 45 million years ago. At that time, Europe had a subtropical climate and was covered by “amber forests”. The Jurassic European conifer trees – nowadays extinct – that produced amber are called *Pinus succinifera*.

These trees produced unusually large amounts of resin, as a protection against insect infestations. The exuded resin became hard into humid sediments, such as clay and sand at the bottom of lagoons or river deltas, thus being preserved for millennia.



The slow process by which resin became amber is not fully understood; however, it is known that environmental pressure and temperature conditions produced structural changes in resin, turning it hard. and that subsequently, the resin volatile oils evaporated.

Amber is not a mineral, but a product of organic origin with an amorphous structure.



Amber has no consistent chemical formula. Baltic gems are rich in succinic acid (3-8%), and are therefore called Succinite. Terpens are also typical components of amber.

TRADITIONAL USES OF AMBER



People used to gather craft and trade amber. The first use of amber in the Baltic Sea region can be traced back to the Stone Age. Amulets made of Baltic amber were found in Egyptian tombs. Baltic countries have about 100 Neolithic burial sites in which amber is included.

Amber has been credited with numerous beneficial properties both physical and spiritual. The Ancient Romans and Greeks used it to cure ailments such as asthma, rheumatism and internal problems. Its purported healing powers have extended to epilepsy, jaundice, kidney and bladder complaints and even the plague. It has also been used as an aphrodisiac and as a protection against witchcraft. Amber is a stone of health and wellness, stone of happiness and sun, its orange (amber) color is considered exciting, effusive and invigorating.



AMBER IN COSMETICS

EXFO-AMBER has special physicochemical characteristics, which make it suitable for effective and safe skin exfoliation.

Density	1.05-1.30 g/ml
Melting point	150-180° C
Granulometry	10-30% < 100 microns 10-30% between 100 and 200 microns 30-60% between 200 and 400 microns 5-10% > 400 microns
Particle morphology	Smoothly rounded
Solubility	Disperses in water and oil Slightly soluble in alcohol and ether

Its aroma is one of the best proofs to identify true amber, because it is very hard to reproduce for amber falsifications. Upon heating or rubbing, Baltic amber spreads a delicate typical fragrance of pine resin. Cosmetic formulations containing EXFO-AMBER spread a subtle aroma that identifies original amber. Furthermore, amber gives cosmetic products a delicate and particular color.

The size and shape of EXFO-AMBER particles make it suitable for mild face exfoliation, as well as for body exfoliation. Figure 1 shows the particles' morphology observed by optical microscopy.



Figure 1. Appearance of EXFO-AMBER (X 10) observed through an optical microscope (Unilux-12, Kyowa)



COSMETIC PROPERTIES AND APPLICATIONS

EXFO-AMBER is a novel plant cosmetic ingredient for skin physical exfoliation. The characteristics of its amber particles make this product suitable to be added to cosmetic formulations aimed at face and body hygiene and peeling (gels, emulsions).

RECOMMENDED CONCENTRATION

The recommended dose is between 5.0-10.0 %.

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