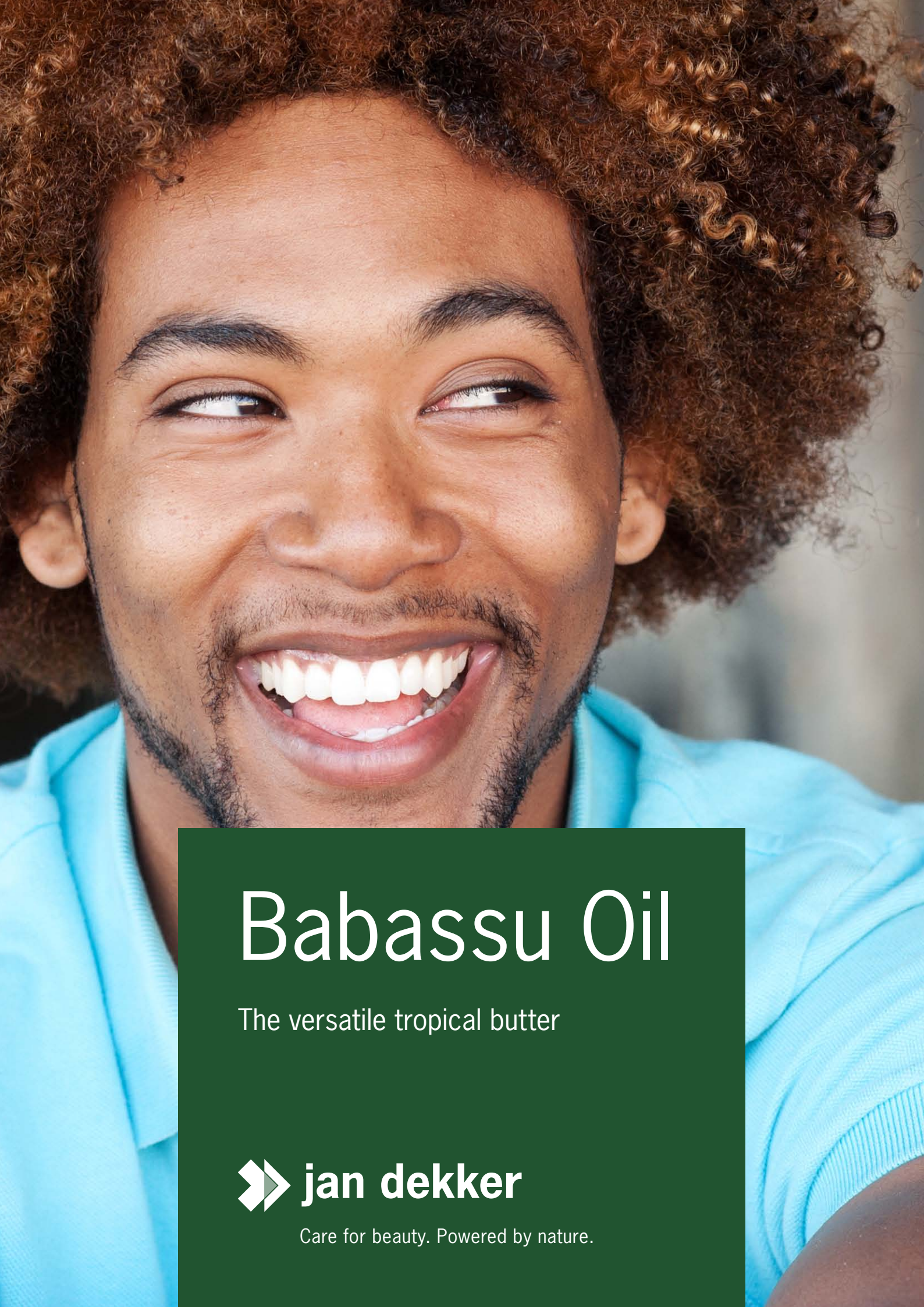


Babassu Oil

The versatile tropical butter

jan dekker

Care for beauty. Powered by nature.

Tropical versatility

- Obtained from wildpicked seeds, tree is native to tropical South America.
- Proven effect on skin hydration and biomechanical properties
- Low melting point compared to many other butters.
- Melts readily on skin contact, can provide cooling effect
- High in lauric acid (approx. 43 %), good choice for hair penetration.

The Babassu tree and its oil

The babassu tree is a large tree belonging to the Arecaceae family, growing up to 20 m, with large leaves. The tree is native to South America, and can be found in e.g. the Amazon rainforest. In some areas it is growing in dense stands, which can provide high yields per hectare. The tree contain numerous fruits growing in large clusters. To reach the oil, one has to break through a very hard shell, considered as one of the hardest in the world. Babassu utilisation contributes significantly to the regional economies / local families. The fruit is used for a variety of purposes, and the seeds are appreciated for its high content of oil (approx. 60–70 %).

A remarkable characteristic of babassu oil is its high content of the relatively short chain fatty acid lauric acid, which gives the oil its low melting point. The chain length of saturated fatty acids determine for a large part its effects in the body, and lauric acid-rich oils have gained interest among health-conscious consumers.

The name babassu 'oil' suggest the oil to be liquid, but in fact, it is a butter at moderate room temperatures. It melts at body temperature, which might give also a cooling effect on skin contact.

The ethnobotanical approach

Different parts from babassu are used for a range of uses. In Brazil, the mesocarp flour has been used for the treatment of different diseases, for instance related to inflammation and venous diseases, and the rationale behind this has been supported by a range of studies showing e.g. the anti-inflammatory properties. Sociodemographic studies among Brazilian babassu nut breakers showed the babassu oil has been used for woundhealing (Souza *et al* 2011).

Hair care

Oils find their way into hair care products since a long time. In general, oils reduce moisture pickup, and on the other hand it is suggested that they can slightly improve moisture retention at low relative humidities. The use of oils is key in the prevention of moisture diffusion, and can play an important role in hair care. Some oils are used to improve the tensile properties of hair.

Oils with shorter fatty acid chains have shown to provide other effects than oils with longer chains. In a test using a lauric acid-rich oil, sunflower oil and mineral oil, only the lauric acid-rich oil reduced protein loss in both undamaged and damaged hair when used as a pre-wash and post-wash grooming formulation. Sunflower and mineral did not help (Rele & Mohile 2003). The differences are ascribed to the ability to penetrate the hair shaft, due to the short chain length of lauric acid, also present in Babassu Oil Refined.

Butter properties

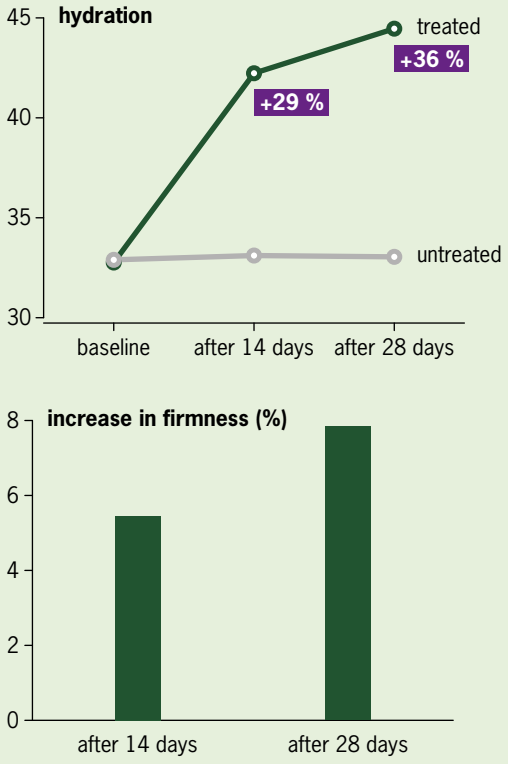
Babassu Oil Refined is a soft butter, which melts readily on skin contact, providing a smooth skin feel. Applications involve skin care as a moisturiser and hair care, e.g. hair treatments. In soap manufacture, only a restricted number of oils are suitable to give the right consistency and foaming characteristics, and especially Babassu Oil Refined can play a pivotal role in soaps.

Solidification yields a smooth structure, which makes it easy to work with. Due to its low iodine value, Babassu Oil Refined has a good oxidative stability.

Clinical test on hydration and biomechanics

20 female volunteers (35 – 62 years) applied our Babassu Oil twice daily on the inner side of the forearms. After application, excess product was wiped off with a cloth. Hydration and mechanical properties were measured after 14 and 28 days, 8 – 12 hours after the last product application, using a Corneometer and Cutometer (Courage & Khazaka). The latter equipment is based on the vacuum-suction principle.

Babassu Oil has shown its skin benefits by improving the cosmetic key parameters – skin hydration and biomechanical properties.



Average values of untreated and Babassu Oil-treated skin areas of hydration (left, arbitrary units), and percentual increase in firmness (right). Improvement percentages is the average improvement of each volunteer, compared to baseline, corrected for changes in untreated areas. The 14 and 28 days improvements shown in the graphs are significant ($p < 0.05$) in comparison to untreated area.

Effects on skin hydration

A statistically significant increase in skin hydration was observed after both 14 and 28 days over the course of the study (see below figure). 100 % of the volunteers showed an improvement.

Effects on skin firmness

A statistically significant increase in skin firmness was observed after both 14 and 28 days (see below figure). Also the elasticity was increased, a statistically significant increase of 4.4 % was seen after 28 days.

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