The Discovery of Outstanding Properties of Organic Rooibos Extract

Authors: Martina Herrmann, Manfred Axterer, Cornelia Müller, Symrise GmbH & Co. KG, Germany

Abstract

Organic Rooibos, the unique South African tea, was proved by our company to be a powerful antioxidant and hair colour protectant that makes it a valuable ingredient for many skin and hair care formulations.

Introduction - Organic Extracts for the Cosmetics Industry

Our company already recognized the organic trend some years ago and offers a range of 100 % organically grown plant extracts to the cosmetics industry. The products from the Extrapone® Organic range are preservative and solvent free powders and are certified as organic according to the EEC Council Regulation No. 2092/91. This regulation ensures the high standards of organic production of agricultural products. Our organic range includes extracts from very traditional plants like camomile, melissa, and linden blossom to very trendy ingredients like green tea and rooibos.

Some years ago only passionate tea consumers knew the fine aromatic, caffeine-free and digestible rooibos tea. Meanwhile the golden-red rooibos tea has reached a large number of friends, who love this unique fine condimental taste.

Rooibos *(Aspalathus linearis)*, a green shrub of 1.5 to 2 meters in height from the botanical family of Fabaceae, grows in one region of the world only, in the unencumbered Cedarberg region of South Africa. First evidence of the usage of rooibos as a beverage by the indigenous people came in 1772 from the botanist Carl Peter Thunberg. At the beginning of the 20th century Benjamin Grinsberg, a Russian immigrant, started the trading of rooibos tea, which has successively gained popularity all over the world, with still increasing global demand.

Phytochemical characterisation

Rooibos is characterized by a range of polyphenolic constituents. Several flavonoid glycosides and their aglycons like the diastereometric eriodictyol-6-C- and -8-C-glucosides, orientin, isoorientin, vitexin, rutin, isovitexin, hyperoside, luteolin-7-O-glucoside, isoquercitrin, luteolin and quercetin have been isolated from rooibos tea. Apart from that, two rare dihydrochalcones, aspalathin and nothofagin, have been identified. Aspalathin, a unique constituent of *Aspalathus linearis*, is the major phenolic in unfermented rooibos tea (up to 12g/100g of dry plant material).[1,2] With procession however, the amount is significantly decreased probably due to conversion into (S)-and (R)-eriodictyol-6-C-glucoside as was shown by biomimetic studies.[3] Rooibos is also known for its relatively high levels of minerals.

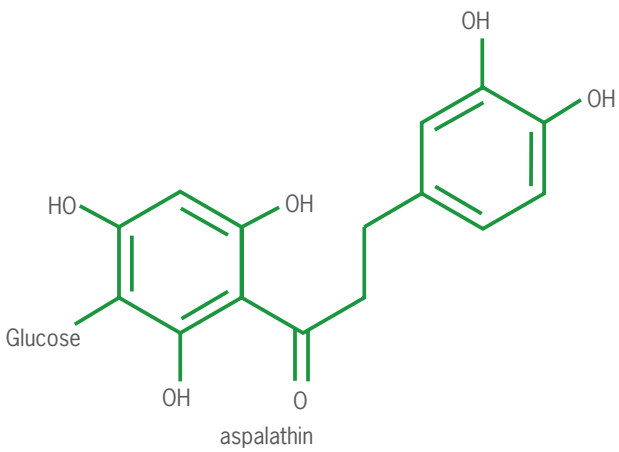

Figure 1: Aspalathin - a unique flavonoid of Rooibos

In contrast to green tea (*Camellia sinensis*), rooibos tea does not contain any caffeine and, apart from small amounts of catechin, none of the typical tea catechins like epigallocatechin gallate, gallocatechin, epigallocatechin, epicatechin, and gallocatechin gallate.