

## BLUEBERRY (BILBERRY)

### ARCTIC BILBERRIES GROW IN THE WILD

The Arctic bilberry, *Vaccinium myrtillus* L., grows in the wild in Finland.

The most common Arctic bilberry products are dried berries, powdered berries,

Arctic bilberries can fit into the daily diet of people of all ages. The berries have been used in Finland since ancient times in folk medicine

In recent years several studies on the functional, health-promoting properties of the berries have been published, e.g. on reducing risk factors relating to diabetes, intestinal cancer, cardiovascular diseases, aging and eyesight. Research results concerning the health aspects of Arctic bilberries have increased the commercial interest in the berries both in Finland and internationally.

### ARCTIC BILBERRIES ARE DARK BLUE INSIDE

Unlike cultivated blueberries (*Vaccinium angustifolium*, *V. corymbosum*), Arctic bilberries are dark blue on the outside and in.

Because of the high anthocyanin content, their flesh is fruity and violet. Bilberries are a superior source of polyphenols and antioxidants. They contain several times more flavonoids and four times as much anthocyanin than cultivated blueberries.

The importance of the bilberry in the human diet and for health is supported by scientific reports demonstrating its effectiveness against several chronic diseases, such as cancer, diabetes and cardiovascular disease.

Compared with the cultivated highbush blueberry, the Arctic bilberries are smaller: they are 6–8 millimetres in size. Bilberries grow individually on the branches of a ramified shrub that reaches 10–40 cm in height. The skin of the Arctic bilberry is dark blue, waxy and soft, and it breaks fairly easily.



Cross-section of an Arctic bilberry

## ARCTIC BILBERRIES ARE HANDPICKED

The name 'Arctic bilberry' is needed to help companies and consumers avoid mistakes in the market. It is good to know that the Arctic bilberry is very different from the cultivated blueberry.

The Arctic bilberry grows in wild forests, while the blueberry is cultivated. The Arctic bilberry is handpicked and grows ecologically, with no carbon or water footprint. It is also available with organic certification, because Finland has the world's largest organic-certified forest berry areas.

### ARCTIC BILBERRIES CONTAIN HIGH AMOUNTS OF ANTHOCYANINS

The anthocyanin levels of Arctic bilberries are high when compared with other berries. It contains anthocyanins at a level that is 3-5 times higher than that of the highbush blueberry. Anthocyanins are bioactive compounds, which give the Arctic bilberry its characteristic dark blue or purple colour inside and out. The difference in flesh colour between the bilberry and blueberry is visible, since the flesh of the highbush blueberry is white.

Natural anthocyanins have many biomedical functions. Many scientific studies link anthocyanins to the inhibition of cardiovascular disorders, age-induced oxidative stress, inflammatory responses, and diverse degenerative diseases. There are also studies where berry anthocyanins improve neuronal and cognitive brain functions and ocular health.

Finland's climate is colder than those of its neighbouring countries, Sweden and Estonia. In mid-summer, there are 19 hours of daylight in southern Finland, and in the northern Arctic Circle region the sun does not set at all. According to the studies, this abundance of light stimulates the creation of anthocyanin compounds; therefore, Arctic bilberries contain anthocyanins at higher levels all over Finland.



Cross-section of a cultivated blueberry