

***Vaccinium macrocarpon* Aiton**

Cranberry Fruit

Vaccinii macrocarpi Fructus

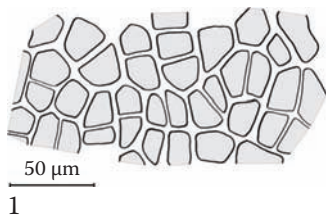
Ericaceae

Cranberry fruit and its juice are primarily used in the Western herb market for the treatment and prevention of bladder infections. Although cranberry juice cocktail has been most frequently studied, cranberry powder and powdered concentrates are common ingredients in herbal supplements used for supporting a healthy urinary system. With widespread cultivation and familiarity of the fruits, adulteration is not evident, though there are very detailed quality criteria for cranberry fruits.

A. Fruit

Surface view: Exocarp consists of anthocyanin-containing red-violet polygonal cells covered by a thick cuticle; groups of cells are separated by fairly thick, colorless walls, whereas the walls within the respective groups are very thin.

Transverse section: Exocarp consists of thick cuticle exocarp cells with thin radial walls and thick inner tangential wall; mesocarp consists of large, spherical, thin-walled cells in which small bundles of spirally thickened vessels are embedded.



B. Seed

Surface view: Testa epidermis is composed of elongated, thickened, and pitted cells.

Transverse section: Testa epidermis is composed of radially elongated rectangular cells filled with mucilage; walls are thickened in a U-shape (exterior wall is thickest), very narrow center lumen; mucilage is radially striated; below the epidermis are several layers of polygonal cells with thick, brown, occasionally reticulately thickened walls; these cells are 250–350 μm long and ~80 μm broad; innermost layer consists of compressed rectangular cells with sinuous anticlinal walls; voluminous endosperm is made up of small, polygonal, oil-containing cells.

Powder: Numerous fragments of the exocarp with colorless cell walls and violet contents; thin-walled parenchyma of the mesocarp; thickened and pitted cells of the testa; oil droplets.

