

Title Sugars, organic acids, phenolic composition and antioxidant activity of sweet cherry (*Prunus avium* L.)

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Abstract

Sugars, organic acids, phenolics and anthocyanins in fruits of 13 sweet cherry cultivars: Badascony, Burlat, Early Van Compact, Fercer, Fernier, Ferprime, Lala Star, Lapins, Noire de Meched, Sylvia, Vesseaux, Vigred (red-coloured) and Ferrador (bi-coloured) were quantified by HPLC. Sweet cherry cultivars of different pomological characteristics and different time of ripening were evaluated sensorily. Cultivars were evaluated for their total phenolic content and antioxidant activity. The sum of sugars (glucose, fructose, sucrose and sorbitol) ranged from 125 to 265 g/kg fresh weight (FW) and the sum of organic acids (malic, citric, shikimic and fumaric) ranged from 3.67 to 8.66 g/kg FW. Total phenolic content ranged from 44.3 to 87.9 mg gallic acid equivalents/100 g FW and antioxidant activity ranged from 8.0 to 17.2 mg ascorbic acid equivalent antioxidant capacity mg/100 g FW. The correlation of antioxidant activity with total phenolics content and content of anthocyanins was cultivar dependent.