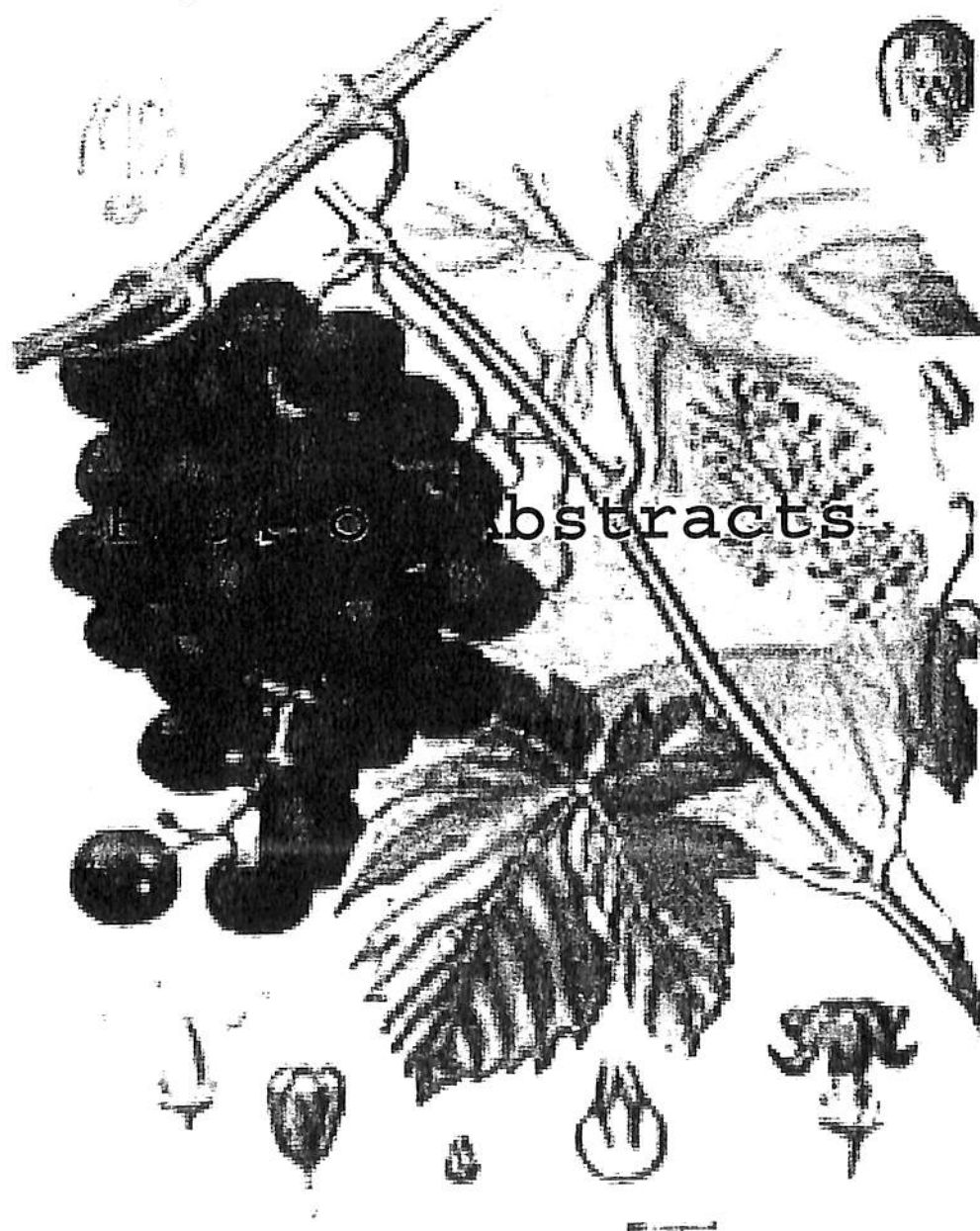


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Anthocyanins extractability of winegrape with different skin hardness

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In wine production, the composition of grapes at the moment of picking is an important determinant of their quality. The knowledge of the grape anthocyanin characteristics, content and extractability, permits the rationalization of maceration process thus allowing winemakers to best exploit the grape potential reached in the vineyard [1]. Many studies have been made to evaluate polyphenolic compounds in grapes and their release facility [2, 3]. Mechanical properties (skin hardness and thickness, pulp firmness, seeds elasticity) were utilized to evaluate grape ripeness [4, 5]. Aim of this work was evaluated the anthocyanins extractability of winegrape with different skin hardness. To such purpose, *Vitis vinifera* cv. Brachetto grape samples were harvested in several vineyards located in Piedmont (North West Italy). Grape berries were calibrated according to their density estimated by flotation in ten different salt solutions. Two classes of maturity were studied: A (184 ± 8 g/L) and B (250 ± 8 g/L). For skin hardness measurement, a puncturing test was performed using a Universal Testing Machine TAXT2i Texture Analyzer equipped with a HDP/90 platform, needle probe and a 5 Kg load cell [6]. For each class, two groups of berries with different skin hardness were selected: the soft ones (0.22-0.40 mJ) and the hard ones (0.45-0.70 mJ). Anthocyanin skin extraction was evaluated in hydroalcoholic solution and kinetics of their dissolution was monitored. For each level of maturity the more hard skin showed a major degree of anthocyanin extractability. In particular, at level B this happens already from first phases of the maceration, while at level A, a meaningful difference of total anthocyanin, was found from the second hour of maceration.

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