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INFLUENCE OF YEAST STRAINS ON PHENOLIC COMPOSITION AND ANTIOXIDANT ACTIVITY OF VRANEC WINES

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The phenolic composition of ten autochthonous monovarietal Vranec red wines produced with different yeast strains was determined by HPLC-DAD analysis. Vranec wines were fermented with the following *Saccharomyces cerevisiae* yeast strains: Clos, RC212, D254, BDX (from Lallemand), and six Vinalco yeasts isolated from the Tikveš wine region (Republic of Macedonia). A total of 19 phenolic compounds were identified and quantified in wines and among them the malvidin-3-glucoside and its derivatives were the major compounds. Wines fermented with Vinalco yeast presented higher amount of anthocyanins as well as phenolic acids (hydroxycinnamic and hydroxybenozoic) compared to the wines fermented with Lallemand yeasts. The content of malvidin-3-glucoside in Vranec wines fermented with Vinalco yeasts ranged between 235–887 mg/L, whereas Vranec wines fermented with Lallemand yeasts contained 335 to 355 mg/L. The caftaric acid, the main cinnamic acid derivative in all wines, was found in concentration between 176–507 mg/L, followed by coutaric and fertaric acids (14–89 and 11–49 mg/L, respectively). Wines showed relatively high value of the antioxidant activity that ranged between 99–117 mg/L Trolox equivalents, regardless the yeast strain used for fermentation.

Keywords: anthocyanins; phenolic acids; HPLC; Vinalco yeast; Vranec wine.

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