

FT-IR ANALYSIS OF SMEDEREVKA WINES PRODUCED WITH HONEY ADDITION BEFORE FERMENTATION

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Smederevka is a Balkan variety grown in Macedonia, Serbia and Bulgaria, as well as other parts of the Balkan. It is a leading grape variety for production of white wine in Macedonia, widely spread in the Tikveš wine region, with total area of 5 389 ha. Wines are fruity, with aromas of citrus peel and green apple. Since this variety is very popular in Macedonia and winemaking technique is well developed and applicable, in this study we aimed to produce a new wine style of Smederevka, adding honey in the must before starting the alcoholic fermentation. Honey was added in a dose of 20 and 40 g L⁻¹ in order to study the physico-chemical composition of wines produced with honey and compare them with the wine produced without honey addition. Fourier-transform infrared spectroscopy (FT-IR) was applied for analysis of alcohol, density, pH, total acids, total reducing sugars, glycerol, acetic acid, fructose, glucose, saccharose, tartaric acid, malic acid, lactic acid, total polyphenolic content (TPC) and total antioxidant activity (TAA). It was concluded that wine fermented with 40 g L⁻¹ honey added before fermentation presented highest content of alcohol, total sugars, glycerol, acetic acid, fructose, glucose, TPC and TAA. Tartaric acid was the dominant organic acid in wines, followed by malic and citric acid. Lactic acid was not detected which means that malolactic fermentation did not start spontaneously in the wines. Wines presented satisfactory values for alcohol, pH, total acidity and acetic acid, confirming the quality and stability of the wines.

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