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The influence of yeast on chemical composition and sensory properties of dry white wines.

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ABSTRACT

This study evaluates the impact on two varietal white wines from ‘Chardonnay’ and ‘Verdejo’ cultivars of different fermentative strategies: inoculation with *Saccharomyces cerevisiae* yeast (CT), sequential inoculation (*Torulaspora delbrueckii* / *Saccharomyces cerevisiae*) (SI), and spontaneous fermentation (SP). The wines’ chemical composition was characterized by oenological parameters, organic acids, metals, major volatile compounds, ester compounds and sensory analyses. The fermentative strategy (CT, SI and SP) was found to be a key factor for assessing different styles of white wines. SI wines showed enhanced ‘mature fruit’ nuances and a chemical profile characterized by higher content of ethyl propanoate, ethyl isobutyrate and ethyl dihydrocinnamate. Meanwhile, the SP wines presented enhanced “stone fruit” nuances possible related to the higher contents of 2-phenyl acetate and isobutyl acetate. After a chemometric approach the above esters were identified as the markers of each fermentative strategy, independently of the variety.

Keywords: Sequential inoculation, spontaneous fermentation, esters, sensory analysis.

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