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**Título artículo:** Co-existence of Inoculated Yeast and Lactic Acid Bacteria and Their Impact on the Aroma Profile and Sensory Traits of Tempranillo Red Wine

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**RESUMEN:**

This study investigates the effects of simultaneous inoculation of a selected *Saccharomyces cerevisiae* yeast strain with two different commercial strains of wine bacteria *Oenococcus oeni* at the beginning of the alcoholic fermentation on the kinetics of malolactic fermentation (MLF), wine chemical composition, and organoleptic characteristics in comparison with spontaneous MLF in Tempranillo grape must from Castilla-La Mancha (Spain). Evolution of MLF was assessed by the periodic analysis of L-malic acid through the enzymatic method, and most common physiochemical parameters and sensory traits were evaluated using a standardized sensory analysis. The samples were analyzed by GC/MS in SCAN mode using a Trace GC gas chromatograph and a DSQII quadrupole mass analyzer. Co-inoculation reduced the overall fermentation time by up to 2 weeks leading to a lower increase in volatile acidity. The fermentation-derived wine volatiles profile was distinct between the co-inoculated wines and spontaneous MLF and was influenced by the selected wine bacteria used in co-inoculation. Co-inoculation allows MLF to develop under reductive conditions and results in wines with very few lactic and buttery flavors, which is related to the impact of specific compounds like 2,3-butanedione. This compound has been also confirmed as being dependent on the wine bacteria used.