



Selection and evaluation of *Saccharomyces cerevisiae* wild strains isolated from fermented must of grapes produced in the São Francisco Valley, Brazil

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The use of *Saccharomyces cerevisiae* indigenous strains in the winemaking as starter yeast alcoholic fermentation is increasingly exploited by wine producers seeking to typicality to their beverages (Sun et al., 2014). These indigenous strains show a greater adaptation to the environment and the particular fermentation conditions, resisting the stresses present. The aim of this study was to select *S. cerevisiae* indigenous strains isolated in the must fermented of grapes (*Vitis vinifera* L.) harvested in the São Francisco Valley, and evaluating its performance during fermentation process of winemaking. One hundred eighty four *S. cerevisiae* indigenous strains were tested for the production of H₂S and 46 did not produce H₂S. Eighty *S. cerevisiae* indigenous strains and six commercial strains were used for micro fermentation experiments with synthetic must (Bely et al., 1990; Rossignol et al., 2003). At the end of the alcoholic fermentation process, ethanol, secondary compounds and the sugar consumption were determined. Based on the micro fermentation results, nine *S. cerevisiae* indigenous strains were selected. These strains and two *S. cerevisiae* commercial strains were used for wine production in small scale. Furthermore, fermentation parameters of yeasts were similar during the winemaking. From thirty three volatile organic compounds identified, sample of wine 8 showed the best concentrations of fruity aromatic compounds. The volatile compound 2-phenylethanol (floral aroma) was obtained in an elevated concentration in the wines 7, 8, and 9 with higher levels than the other ones. After further studies, these strains may be used to produce wines in the São Francisco Valley Region, contributing for the typicality of the wines produced in that area.

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