Abstract
The effect of using mixed cultures of non-Saccharomyces and Saccharomyces cerevisiae yeasts in the physicochemical and sensory qualities of the wines were analyzed in this study. Based on growth curves, sugar consumption and glycerol production in synthetic must, Candida membranifaciens L1805 was selected from a group of four Candidas spp. isolates from Chile and Argentina. This yeast was subsequently used in combination with S. cerevisiae in Chardonnay must. A monoculture of S. cerevisiae was used as control. The wines fermented with mixed cultures had lower volatile acidity and ethanol concentration than the control. Furthermore, the chromatographic analysis showed that the wines from mixed cultures presented differences in the concentration of esters and propanol. These characteristics positively influenced the sensory qualities of the wines produced with mixed cultures, which was reflected in the preference for these wines by a panel of enologists. This study shows that the use of non-Saccharomyces yeasts could be a strategy to obtain distinctive wines using the native microorganisms from each winemaking area.

Keywords
Non-Saccharomyces, wine, aroma, flavor, co-fermentation.