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RESUMEN:

Biological acidification and bioprotection are interesting tools to overcome some problems of climate change and fit some consumer requirements for fresher wine styles. Juices of Airén (Vitis vinifera L.) were fermented by Lachancea thermotolerans (Lt) and Metschnikowia pulcherrima (Mp) starters and compared with Saccharomyces cerevisiae (Sc). Fermentations were monitored and wines were analysed for standard parameters and volatile fractions by SPE-GC–MS. Wines were evaluated by an experienced tasting panel. All ferments reached dryness with lower volatile acidity and lower ethanol than the control. All strains of Lt used for biological acidification reduced the pH values of wines (pH 3.25–3.56) more than chemical acidification with 1.5 g/L of tartaric acid (pH 3.64). Wines were characterised by different total acidity and volatile composition according to the yeasts used. Lt and Mp produced wines with higher perception of freshness and acidity than Sc control, probably elicited by the higher production of lactic acid complemented with higher contents of succinic acid (+0.2–0.6 g/L). Overall, the results showed that bioacidification is a practical alternative to chemical acidification to cope with either climate change or consumer demand for fresher wine styles.

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