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Título artículo: Use of *Lachancea thermotolerans* for Biological vs. Chemical Acidification at Pilot-Scale in White Wines from Warm Areas

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RESUMEN:
Climate change is affecting vineyards, resulting in grapes with a low acidity a high pH and sugar at harvest time. The most common procedure so far to improve the acidity and reduce the final pH of wines is to use tartaric acid, but wine can also be acidified microbiologically using *Lachancea thermotolerans* yeasts, a natural bio-tool that acidifies gradually during the first stage/days of fermentation. Two strains of L. thermotolerans were compared with one *Saccharomyces cerevisiae* at a pilot-scale under similar fermentation conditions and in duplicate. A sequential inoculation was performed on the third day for the non-*Saccharomyces*, producing only about 1 g/L of lactic acid, which was suitable for comparison with the Saccharomyces, to which 1.5 g/L of tartaric acid had been added to lower the final pH. The three fermentations ended with a total acidity without significant differences. A significant and normal feature of the *L. thermotolerans* yeasts is their higher propane-1,2, 3-triol production, which was observed in the Laktia yeast, and the acetic acid was > 0.3 g/L. The amount of volatile metabolites was generally higher for non-*Saccharomyces* and the increase was seen in carbonyl compounds, organic acids, lactones, fumaric compounds, and phenols. Finally, the sensory analysis showed that there were hardly any significant differences, even though the non-*Saccharomyces* had a higher quantity of volatile metabolites, which could lead to a good acceptance of the product, since biological acidification was used, generating a more natural product.

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