

Additions of Glutathione or Specific Glutathione-rich Dry Inactivated Yeast Preparation (DYP) to Sauvignon blanc Must: Effect on Wine Chemical and Sensory Composition

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Key words: Sauvignon blanc, glutathione, inactivated yeast, aroma, sensory analysis

Abstract:

Although the addition of pure glutathione (GSH) is not allowed under current regulations, the concentration of this compound can be increased in wine through the addition of glutathione-enriched dry yeast preparations (DYP). These preparations have been observed to have antioxidant properties and could thus influence wine aroma and sensory characteristics. The main aim of this study was to investigate the effect of DYP and GSH juice additions on the sensory and chemical composition of Sauvignon blanc wine. Four juice additions were performed and compared against a control treatment: 5.5 mg/L of GSH; 0.4 g/L of DYP; 80 mg/L of GSH; 0.4 g/L of DYP plus 80 mg/L of GSH. After three months of bottling, the volatile and sensorial composition was investigated. The addition of DYP preparations to must increased the concentration of certain wine volatile compounds, with increased attributes of riper tropical fruit aromas, which was not always observed with the GSH additions. The addition of DYP influenced the concentrations of some volatile compounds, which modified the white wine aroma. The release of compounds other than GSH by the yeast products is proposed as the reason for these changes. The results observed in this study can assist winemakers to modify the aroma profile of Sauvignon blanc wines.

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