

Influence of protein stabilization with aspergillopepsin I on wine aroma composition

The protein haze formation in white and rosé wines during storage, shipping and commercialization has always been an important issue for winemakers. Among the various solutions industrially proposed, the use of bentonite is certainly the most widespread. However, the harmful effects of this treatment are known either in terms of wine volume loss and wine flavour and aroma. The use of aspergillopepsin I -an acid endoprotease from *Aspergillus spp*- in must and wine has been recently approved by OIV and the European Commission for protein stability, coupled to a heat treatment. Beyond the established efficacy of this approach on wine stability, little is known about its influence on the wine aroma profile. The present study aims to evaluate the combined effect of heat treatment with proteases (HP) in musts on the concentration of 74 wine aroma compounds at lab and semi-industrial scale. Eight grape musts were treated with acid proteases and heated at 70°C for the lab-scale trials, and the concentrations of wine volatile compounds at the end of the alcoholic fermentation were compared with those deriving from a traditional white and rosé winemaking protocol. The must treatment induced a significant increase (one-way ANOVA, Tukey's HSD p

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