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Título artículo: Influence of oenological tannins on malvidin-3-O-monoglucoside copigmentation in a model wine solution

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RESUMEN:
Aim: The aim of the study was to evaluate the effects of five different oenological tannins on the color of a malvidin-3-O-monoglucoside solution, and thereby assess the effectiveness of these tannins as copigments.
Methods and Results: Solutions containing malvidin-3-O-glucoside and different doses of copigments were prepared. The malvidin-3-O-glucoside concentration of the solutions, and color parameters, were measured after 1 and 7 days.
Conclusions: On days 1 and 7, a decrease in lightness and hue, and an increase in chroma, absorption at 520 nm and wavelength of maximal absorption were observed in solutions containing the oenological tannins. A decrease in malvidin-3-O-glucoside concentration in the tannin-containing solutions compared with the control solution was detected on day 7. The extent of this decrease depended on the specific tannin. Some changes in color parameters on day 7 compared with day 1 were observed, which were probably due to the formation of new pigments. The total color difference between the different malvidin-3-O-glucoside solutions and a pure white solution was calculated to estimate the effectiveness of the different tannins as copigments.
Significance and impact of the study: These results prove that supplementation with oenological tannins is a viable option for improving the color of red wines. A copigmentation index is proposed for measurement of the effectiveness of copigments.

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