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Título artículo: Stilbenes in grapes and wines of Tannat, Marselan and Syrah from Uruguay

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RESUMEN:

Aim: The aim of the study was to investigate the stilbene composition of grapes and wines of the Vitis vinifera cultivars Tannat, Marselan and Syrah cultivated in Uruguay. The effects of delaying the harvest on stilbene concentrations were determined, and the stability of stilbenes during wine storage was assessed.

Methods and results: Stilbene concentrations were determined in the grapes and wines of two vintages (2015 and 2016) and two harvest dates for each cultivar. Vinification was carried out by traditional maceration, and samples of the wines of each vintage were analysed in the period from 3 months after devatting to up to 24 months later. After solid-phase extraction, stilbenes were identified and quantified by HPLC-ESI-MS/MS using a multiple reaction-monitoring approach. In the grape berries, stilbene concentrations were between 1.6 and 7.7 mg/kg, depending on grape cultivar, growing season, and in Syrah, harvest date. In the wines, stilbene concentrations were initially between 0.9 and 5.0 mg/L, being highest in Syrah, lowest in Marselan, and intermediate in Tannat. Stilbene concentrations in the Marselan wines were lower than expected based on stilbene concentrations in the grapes from which they were produced, suggesting poor extraction during winemaking. Total stilbene concentrations remained very stable during the analytical period.

Conclusions: Delaying the harvest does not necessarily increase the stilbene content of grapes, but it can do so significantly, as shown for Syrah. For some grape cultivars, such as Marselan, poor extraction of stilbenes during winemaking can limit their concentrations in the resulting wines. **Significance and impact of the study:** The results of this study show the relevance of grape cultivar, degree of maturity and storage time may have into stilbenes. They provide reference data on the stilbene composition of grapes and wines produced under Uruguayan winegrowing conditions. The high stability of stilbenes during wine storage is relevant for consumers interested in red wine as a source of bioactive compounds.

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