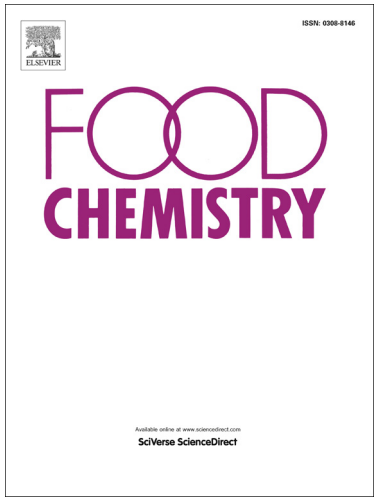

Improvement of grape and wine phenolic content by foliar application to grapevine of three different elicitors: methyl jasmonate, chitosan, and yeast extract

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Abstract

Phenolic compounds play a key role in grape and wine organoleptic properties, being therefore a key parameter in wine quality. Elicitor application constitutes an interesting field of research since it is indirectly involved in the accumulation of phenolic compounds. The aim of this **study** was to compare the effect of the application of three different elicitors on **both** grape and wine phenolic content. Methyl jasmonate, chitosan, and a commercial yeast extract were **applied to the canopy** at veraison and one week later. Results showed that foliar treatments carried out with methyl jasmonate and yeast extract **achieved** the best results, **increasing** grape and wine anthocyanin content **when compared to the** control. Moreover, the application of the yeast elicitor also enhanced grape stilbene content. In contrast, **the** chitosan treatment did not have a substantial impact on **the** phenolic compounds. The results of this study indicate that methyl jasmonate and yeast extract applications could be a simple practice to increase grape and wine phenolic content.

Keywords: Vitis vinifera L., Tempranillo, foliar application, anthocyanins, flavonols, non-flavonoid, methyl jasmonate, chitosan, yeast extract