

EVALUATION OF THE EVOLUTION OF THE ANTHOCYANINS PROFILE IN RED WINE GRAPES VARIETIES IN ALENTEJO

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Abstract

The flavonoids (including anthocyanins) are wine compounds with important anti-oxidant activity, protecting the cells against oxidative processes, preventing cardiovascular and neurodegenerative diseases, cancer, among others (Antoniolli et al. 2015; Castañeda-Ovando et al. 2009; Hosu et al. 2014; Huang et al. 2009; Kong et al. 2003).

Anthocyanins in grapes at harvest are determinant to red wine quality and their development in the grape must be characterised in order to determine the most suitable date for the harvest. Thus the aim of this research is the evaluation of anthocyanins composition in two red wine grape varieties from véraison continuing through ripening. Anthocyanins were quantified by high resolution liquid chromatography (HPLC-DAD). Additionally, the total phenols content were quantified by UV-Vis Spectrometry.

The anthocyanins' profile evolution may be dependent on the variety and ripening phase. During ripening grape samples have shown an increase of coumaryl derivatives. This information may lead us to understand the anthocyanins biosynthesis pathway in different grape varieties. The development of anthocyanins from the véraison seems to follow a pattern that coincides with the increasing accumulation of soluble sugars.

Keywords: Anthocyanins, grape ripening, tannins, flavonoids, HPLC-DAD