

ABSTRACT

THE EVOLUTION OF PHENOLIC COMPOUNDS IN RED WINE DURING POST-FERMENTATION MATURATION: CORRELATION WITH PERCEIVED ASTRINGENCY AND BITTERNESS

Spectrophotometric methodologies used for the analysis of red wine phenolics are increasingly being utilized for the determination of red wine quality. This study examined the sensitivity of these methods for tracking the subtle changes that occur in the structural properties of phenolic compounds of a red wine during post-fermentation maturation. The measurements determined to have changed significantly were then correlated with sensory changes in both astringency and bitterness over time. Two wines were tracked for both chemical and sensorial parameters. The evolution of total anthocyanins and color intensity were found to have the highest correlation with the changes in astringency for both wines. Bitterness was not found to have changed significantly for either wine during the course of this study. Several measurements previously related to mouthfeel properties of red wine demonstrated no significant change in this study and could be due a high coefficient of variation for these measurements.

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