



## Phenolic compounds and organic acids evaluation on red grapes used for winemaking in the Northeast of Brazil

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Monitoring maturation to determine harvest time is very important to determine the enological potential and the quality characteristics and typicality of the wines (Borghazan et al., 2011). Considering that there is no cold weather in the São Francisco Valley, it is possible to scale and production of two harvests per year. This study aimed to determine the chemical composition of the 'Syrah' and 'Tempranillo' grapes, during maturation. Sixty plants were used for each cultivar, divided into three blocks. The vineyards were implemented in 2006, with upward vertical conducting system, rootstock IAC-766 and drip irrigation. Four hundred berries of each variety were evaluated from veraison until harvest, between May and July, 2008. Spectrophotometric and chromatographic analyses of grapes were carried out weekly to determine the follow analytical parameters: total polyphenol index; organic acids; total anthocyanins; color intensity and tonality (Lima *et al.*, 2011; Giovanelli and Buratti, 2009; Harbertson and Spayd, 2006). The results showed different responses of the two varieties throughout maturation. Significant values were observed for malic and citric acids, total anthocyanins, total polyphenol index, color intensity and tonality for the two varieties evaluated. At harvest, 'Syrah' grapes had high malic acid content, indicative of incomplete maturation. A significant correlation was observed between total polyphenols index and anthocyanins for both cultivars. This correlation can be used as a tool to differentiate cultivars (Giovanelli and Buratti, 2009). Chromatic parameters were determined due to the quality of the visual attributes of wines. Different adaptation was observed for both cultivars in the edaphoclimatic conditions of this region. It is necessary to adopt specific winemaking protocols to enhance the quality of wines.

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### References

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