



Antioxidant capacity, color and total polyphenols in Nazareno and Giallo Muscat white wines produced in the São Francisco Valley, Brazil

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One of the most produced and consumed wine from the São Francisco Valley (SFV) is the Muscat sparkling wines. The main varieties used are Italia and Canelli Muscats. Nazareno and Giallo muscat varieties are used in many regions to produce sparkling wines, presenting typical characteristics. In order to evaluate the adaptation potential of these two varieties to the VSF in the Northeast of Brazil, this work aimed to elaborate fine white dry wines by using both cultivars, and the effect of light and temperature on wine stability. Vines were planted in a partner winery in 2014 in Casa Nova city, Bahia state, Brazil. After harvested in March 2016, grapes were sent to Enology Laboratory of Embrapa in Petrolina, and wines were elaborated by traditional method of white grape vinification (Giovannini and Manfroi, 2009). After alcoholic fermentation at 18°C±2, wines were corrected for 40 mg L⁻¹ of free SO₂ and then bottled. Bottles were placed in a box with controlled environment (35°C temperature and light with length wave at 280nm), and wines were evaluated 6 days after (Garcia-Falcon et al., 2007). The physical-chemical analyzes performed were total acidity (in tartaric acid g L⁻¹), dry extract (g L⁻¹) and spectrophotometric parameters, as color index (I420nm); total polyphenol index (TPI). Wines were analyzed before and after 6 days after light and temperature exposition. The results obtained presented significant differences according to the variety, by using Tukey at 5%, and stabilization vary strongly. Wine tasting presented typical characteristics of muscat wines (data not shown). Color index varied from 0.0517 and 0.4707 in Nazareno muscat wine, while for Giallo muscat wine varied between 0.0387 and 0.4880, before and after light and temperature exposition. According to TPI, values varied in Nazareno from 0.0630 to 0.4600, and in Giallo wine from 0.0687 and 0.2500. These variation could be explained by total acidity and dry extract determined, in Nazareno and Giallo wines total acidity was 4.87 and 6.0 g L⁻¹ of tartaric acid, and 17,95 and 17,45 g L⁻¹ of dry extract, respectively. Higher acidity in Giallo than Nazareno wine influenced on best stability when wines were exposed to high light and temperature. As conclusion, wines presented interesting muscat characteristics, and high acidity found in Giallo muscat wine helped to have less oxidation as compared to Mazareno muscat wines. Further studies need to be made to evaluate the cultivar adaptation to the region and wine stabilization according to harvest date.

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References

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