

POTENTIAL OF SUB-MIDDLE SÃO FRANCISCO RIVER VALLEY REGION TO PRODUCE QUALITY GRAPE JUICES BY TWO CROPS PER YEAR

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Consumption of grape juice is presented as a valuable alternative in prevention of chronic diseases because of the content of phenolic compounds and their antioxidant power. In Brazil, the most used variety to elaborate grape juice is 'Isabella' grape and it has demonstrated good adaptation to the tropical semi-arid climate, characteristic of the region of the Sub-middle São Francisco River Valley, as 'Early Isabella' grape. Due to the climate characteristics it's possible to harvest two crops per year. Aiming to study the potential of grapes juice in this region, two experimental 'Early Isabella' juices, harvested in March (1st semester) and September (2nd semester) of 2010, were evaluated for total contents of phenolic and anthocyanins, chromatographic profile, as well antioxidant activity by FRAP method. Twenty polyphenolic compounds were determined by HPLC-DAD using as mobile phase acidified water (pH=2.05), methanol and acetonitrile. The results demonstrated that the 'Early Isabella' juice elaborated with grapes harvest in September was significantly higher in content of phenolic compounds (1,020 mg EGA.L⁻¹), anthocyanins (1.29 g cianidina-3-glicosideo.L⁻¹) and antioxidant activity (11.86 MTE.L⁻¹) than grapes harvest in March. This juice stood out mainly in relation to the contents of catechin (4.52 mg.L⁻¹) and the procyanidins B1 (41.65 mg.L⁻¹) and B2 (4.40 mg.L⁻¹). Nevertheless, this research showed that the cultivation of grape 'Early Isabella' in tropical conditions is a great alternative to increase the production of grape juice in Brazil, allowing to obtain a product rich in phenolic compounds and that is a source of antioxidants.

Keywords: grape juice, Early Isabella, *Vitis labrusca*, antioxidant activity, polyphenolic compounds.