

Rootstock influence on Bordô grape juice composition elaborated in São Francisco Valley, Brazil

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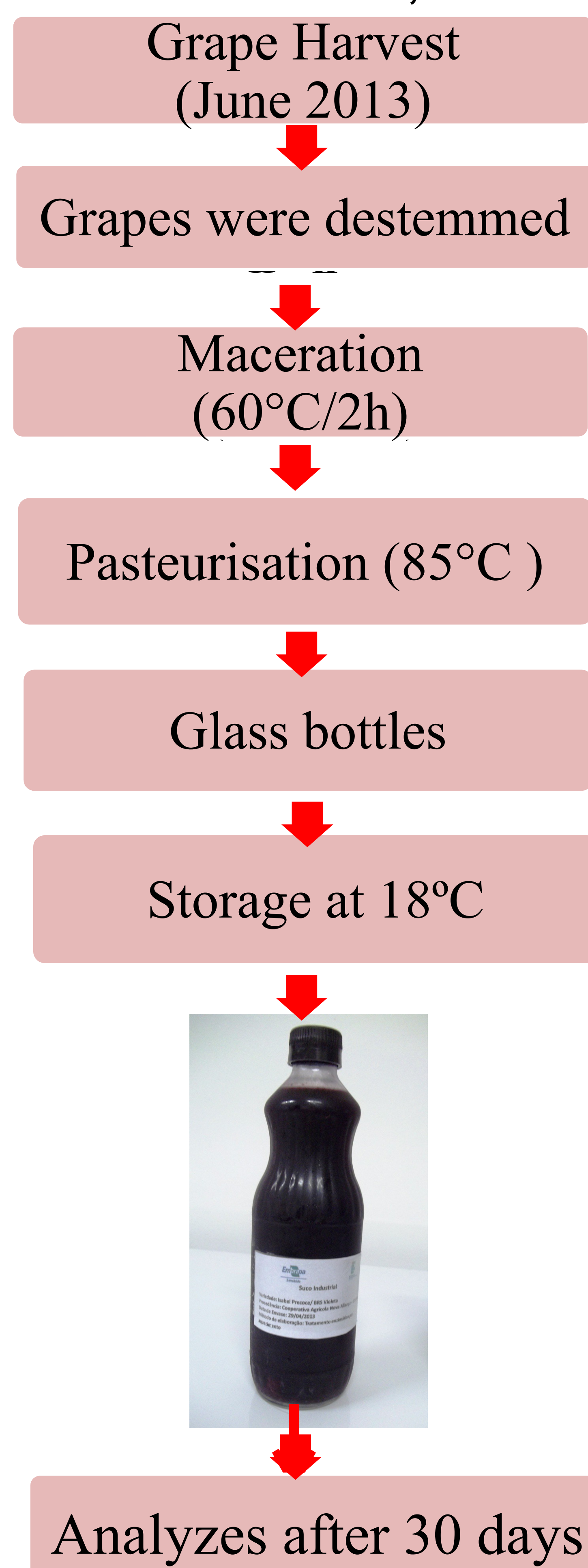
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Introduction

The São Francisco Valley, Northeast of Brazil, is located between parallels 8 and 9 of the Southern Hemisphere. It is characterized by having tropical semi-arid conditions, soil characteristics and climate which allows the grape harvest schedule for the production of juice grapes throughout the year. The Bordô grape is used for juices in many regions, due to the high pigment content. Several rootstocks have been used in many regions. This study aimed to evaluate the composition of the juices produced from Bordô grapes grafted onto two rootstocks (IAC 572 and IAC 766) and conducted in espalier.

Materials and methods

The experiment was conducted at Embrapa Semi-Arid, in Petrolina-PE, Brazil.



Results and Discussion

According to the results of the physical-chemical analyses of the grape juices, it can be seen that the rootstock influenced the quality of the juices, and only the pH and density did not differ significantly ($p < 0.05$) see Table 1). Juices from grapes harvested in vines grafted onto IAC 766 presented higher anthocyanins content and color as compared with other treatment. But sugar content was a problem due to the low values of the products.

Table 1. Physical-chemical characteristics of Bordô juices from grapes of two rootstocks (IAC-572 'Jales' and IAC 766 'Campinas'), harvested in June 2013 in the Sao Francisco Valley, Brazil.

Variables	Cultivar/ Rootstock	
	Bordô IAC 572	Bordô IAC 766
pH	3.4 ± 0.04 a	3.4 ± 0.01 a
Density (g L ⁻¹)	1.056 ± 0.00 a	1.055 ± 0.00 a
Total Soluble Solids (°Brix)	14.0 ± 0.06 b	15.5 ± 0.02 a
Total acidity (g L ⁻¹)	7.15 ± 0.06 a	6.80 ± 0.07 b
Volatile acidity (g L ⁻¹)	0.14 ± 0.02 b	0.53 ± 0.01 a
Total Polyphenol index (I-280)	116.27 ± 0.08 b	137.63 ± 0.06 a
Color index	13.63 ± 0.05 b	20.69 ± 0.08 a
Anthocyanins (mg L ⁻¹)	2294.37 ± 2.08 b	2721.17 ± 2.01 a
Tonality	0.70 ± 0.02 b	0.80 ± 0.02 a

Conclusions

Rootstock influenced significantly grape juice composition in São Francisco Valley, Brazil. IAC 766 allowed to increase anthocyanins content and color of the juices, but both treatments presented low sugar content. New studies need to be made before indicate Bordô cultivar to commercial use.