



XXIV Encontro Luso Galego de

QUÍMICA

21 A 23 NOVEMBRO 2018

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XXIV ENCONTRO LUSO-GALEGO DE QUÍMICA

Mantendo vivo o evento iniciado em 1985, decorrente da estreita relação existente entre a Delegação do Porto da Sociedade Portuguesa de Química (SPQ) e o Colegio Oficial de Químicos de Galicia (COLQUIGA), O Departamento de Química da Faculdade de Ciências tem o prazer de organizar e receber o XXIV Encontro Luso-Galego de Química, que irá decorrer entre os dias 21 e 23 de novembro de 2018.

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Comparison of ion exchange resins at industrial scale and enological stabilizers treatments for tartaric stabilization of white Port wine: Impact on wine physicochemical and sensory profile

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A frequent cause of stability loss in a wine is the formation of crystalline salts of potassium bitartrate (KHT) that appears mainly at low temperatures, as a consequence of a large decrease in its solubility [1, 2]. Although important for consumer's acceptance, there are only few studies regarding white Port wine tartaric stabilization. Therefore, tartaric stabilization has been carried out in a white Port wine by ion exchange resins, at an industrial scale, and by the addition of enological stabilizers, with the main objective of comparing the impact of these treatments on wine physicochemical and sensory profile. Port wine is a Portuguese fortified wine produced exclusively in the Douro Valley demarcated region. In this study, a white Port wine from the 2015 vintage from Gran Cruz winery, Portugal was used and almost 20% from the total wine volume was treated by ion exchange resins (pH-Stab®). The stabilizers used were metatartaric acid and carboxymethylcellulose (CMC1 5%, CMC2 20%; CMC3 solid) with different structural characteristics. Wine tartaric stability was measured by the mini contact test. Wines phenolic composition - total phenols, flavonoid and non-flavonoid compounds, as well as the chromatic characteristics by the CIELab method, were also evaluated. Sensory analysis was performed by a panel of eight trained tasters. Twenty-one attributes were selected and were quantified using a five-point intensity scale.

As expected, all treatments assayed stabilized the white Port wine. All the samples presented a slight decrease in total phenolic compounds and non-flavonoid phenolic compounds. Concerning sensory analysis, wine treatment with ion exchange resins was more scored for the visual limpidity attribute and for the aroma attributes citrus and tea.

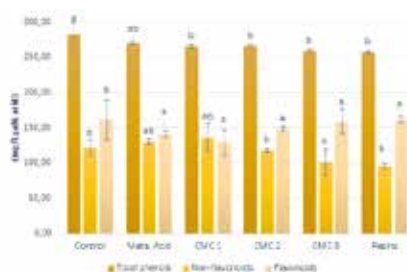


Fig.1. Total phenols, non-flavonoid and flavonoid phenolic compounds of treated and untreated wine.

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