XIV Encontro de Química dos Alimentos

Indústria, Ciência, Formação e Inovação

LIVRO DE RESUMOS

Escola Superior de Tecnologia e Gestão

Instituto Politécnico de Viana

6 a 9 de novembro de 2018

Ficha Técnica

Titulo

Livro de Resumos do XIV Encontro de Química dos Alimentos

Indústria, Ciência, Formação e Inovação

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Edição

Comissão de Organização

ISBN

978-989-98936-9-6

Depósito Legal

447938/18

Novembro 2018

Esta publicação reúne os resumos das comunicações apresentadas no XIV Encontro de Química dos Alimentos. Todas as comunicações orais e em painel foram avaliadas pela Comissão Científica do Encontro.

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CO03
Tartrate stabilization of rosé wine using ion exchange resins: Impact on wine sensory characteristics

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Tartaric precipitation in bottled wine is an important problem for the wine industry by the sensory undesirable aspect and, therefore, wineries employed several treatments to prevent this precipitation to satisfy the quality criteria of wine consumers.
For example, according to Resolution 43/2000 [1], the addition of certain stabilizers, such as metatartaric acid and carboxymethylcellulose (CMC) or the treatment of the wine with ion exchange resins, are accepted and have been successfully used to prevent tartaric precipitation in white and red wine [2,3]. However, there are few studies regarding rosé wine. The main difference concerning these two stabilization processes is that the ion exchange resins removes the compounds that contribute to tartrate instability. Anion exchangers are not allowed by the OIV [1] due to the negative effects on the wine physiochemical and sensory quality [4,5].
Therefore, the aim of this study was to evaluate the effect of cation exchange resins on rosé wine tartaric stabilization efficiency and wine sensory quality compared to the effect of the addition of different enological stabilizers. In this study a rosé wine from the Douro Valley demarcated region, 2015 vintage, was used, and ion exchange resin *versus* CMC's, with different structural features [2], as well as metatartaric acid, were tested concerning their tartaric stabilization efficiency and sensory quality. In this work almost 30% from the total rosé wine volume was treated by ion exchange resins. As expected, all treatments assayed stabilized the rosé wine. The cation exchange resins process could be a useful tool to maintain wine quality, as the sensory analysis data showed. Main differences were obtained for the wine visual descriptor, namely limpidity attributes, which was higher scored in the wine treated with ion exchange resins. These results show that ion exchange resins could be an interesting process for rosé wine tartaric stabilization.

Keywords: Rosé wine, ion exchange resins, tartaric stability, enological stabilizers, sensory quality.

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Acknowledgements: This work was funded by the Chemical Research Centre (CQ-UTAD). Additional thanks to AEB Bioquímica Portuguesa.