Sugar reduction in white and red musts with nanofiltration membranes

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ABSTRACT

In recent years the alcohol content of wine increases mainly due to climate change. Moreover, at present, consumers are increasingly demanding more aromatic and less alcoholic wines, it is due to the greater social awareness in the alcohol consumption and the regulations of the alcoholic products. The aim of this work is the reduction of sugar in the grape must to obtain wines with a slight reduction of their alcoholic degree. A reduction of sugar has been by performing two successive stages of nanofiltration. To this end, we have worked with two types of musts: one from the Verdejo variety of white grapes and the other from red grapes of the Tinta de Toro variety. Each must has been fermented both after treatment and, to be used as control, without any filtration in order to check the effectiveness of the process. Once fermentation is completed, wide-ranging analysis have been used to study all possible changes in the characteristics of the wine from a chemical point of view. The alcohol reduction reached by the wines obtained after nanofiltration and mixing of both white and red musts has been satisfactory.

Keywords: Membrane; Nanofiltration; Fouling; Sugar reduction; Musts; Low alcohol-content wines