Microbiological and Organoleptic Impact of Three Different Technical Procedures in Order to Prepare Wine for Bottling

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Keywords: filtration thresholds, bottling, organoleptic impact, red wine

Abstract

In order to establish the extent to which each of the technical sequences regarding the preparation of wine for bottling (3 final filtration thresholds: 0.65µm, 2µm, and 5µm) were in keeping with the cellar objectives and to measure the analytical, microbiological, and organoleptic impact on the wine for each sequence, over a one-year period we monitored a red wine prepared according to the 3 methodologies. A low initial microbiological level (absence of Brettanomyces, Pédiococcus, and Lactobacillus), combined with a stable active SO_2 content between 0.4 and 0.5 mg/l, enabled analytical and microbiological stability of all the wines compared. The triangular tests performed by a panel of trained oenologists did not reveal any significant differences linked to the technical sequences compared.

How well a wine is prepared for conditioning and the technical choices made during bottling are determining factors for the preservation of the wine's analytical and organoleptic characteristics up until the time of consumption. The appearance of microbiological alterations after bottling is not uncommon.

Operators often wonder what impact the microbiological-stabilization treatments will have on the wine's organoleptic characteristics.

Few studies compare different filtration thresholds during membrane filtration.

At our clients' request and with funding from the Provence-Alpes-Côte d'Azur region, the Cooperative Wine Institute (ICV) has carried out a study whose main objective was to determine the microbiological and organoleptic impacts of three different technical procedures in order to prepare wine for bottling.

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