

The Impact of the Genetic Groups of Microorganisms on the Production of Mousy-Compounds

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Abstract : Nowadays, it is starting to be more frequent to detect wines with mousy off-flavor. The reasons behind this could be the significant decrease in sulphur dioxide, the increase in pH, and the trend for spontaneous fermentation in wine. This off-flavor can be produced by *Brettanomyces bruxellensis* or some Lactic acid bacteria. So far there is no study working on the influence of the genetic group on the production of these microorganisms. Objectives: The objectives of this research are to increase knowledge and to have a better understanding of the microbiological phenomena related to the production of the mousy off-flavor in the wine. Methodologies: In this research, microorganisms were screened in an N-heterocycle assay medium (this medium contained all known precursors) and the production of mousy compounds was quantified by Stir Bar Sorptive Extraction-Gas Chromatography-Mass Spectrometry (SBSE-GC-MS). Main contributions: *Brettanomyces bruxellensis* and *Oenococcus oeni* could produce mousiness at a different amount depending on the strain. But there is no group effect.

Keywords : mousy off-flavor, wine, *Brettanomyces bruxellensis*, *Oenococcus oeni*

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