Relationship between volatile profile and sensory characteristics of Malvasia Fina and Gouveio monovarietal wines from Douro Valley

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White wines are, in general, fruitier and fresher than red wines. These descriptors depend on the wine grapes varieties and, with no less importance, on the winemaking technology. Nowadays, the use of wood barrels in the elaboration of quality white wines becomes common in winemaking, and some studies showed the influence of wood compounds on the white wine volatile composition \([1, 2]\). Flavour notes that are common descriptions of wines exposed to oak include caramel, cream, smoke, spice and vanilla \([3]\). In this work, monovarietal wines from two distinct grape varieties, Malvasia Fina and Gouveio, produced in stainless steel tanks and oak wood barrels, were analysed chemically and sensorially, before vinification, two months after vinification and five months after vinification. After SPME-GC-MS analysis and sensorial evaluation it was observed that Malvasia Fina white wines are more influenced by the vinification vat (oak wood or stainless steel) concerning aromatic and sensory attributes than the wines obtained from Gouveio grape variety independently of time. This knowledge could be a tool for the winemakers in order to better choose the winemaking process to obtain wines with higher quality standards.

\[1\] MS Pérez-Coello, MA González-Viñas, E García-Romero, MD Cabezudo, J Sanz, Chemical and sensory changes in white wines fermented in the presence of oak chips. *Int. J. Food Sci. Techn.* 2000, 35, 23–32.

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