



## Flavour and odour profile modifications during the first five years of Lourinhã brandy maturation on different wooden barrels

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### Abstract

The same Portuguese brandy from the region of Lourinhã was used to fill 63 different wooden barrels. These barrels were made according to a two factorial experiment (7 woods × 3 toasting levels × 3 replicates). Samples of the brandies were taken after two, three, four and five years of maturation time.

The flavour and odour profile of these 63 samples were evaluated each year by a panel of judges, previously selected and trained, using a structured scale for 20 attributes.

The results obtained showed a significant effect of maturation time on several sensory attributes, namely alcohol, fruity, vanilla, woody, burned/toasted, dried fruits, smoke, tails, glue, smooth, caoutchouc, burning, astringency, bitterness, body, flavour complexity, retronasal aroma and flavour persistence. The panel also evaluated the overall quality of the brandies, which was also strongly influenced by the maturation time. The intensity of many positive brandy attributes (vanilla, woody, dried fruits, toasted, smoke, body, flavour complexity, retronasal aroma and flavour persistence) increased over the time, as well as the overall quality. Conversely, the intensities of other attributes, such as alcohol, astringency, fruity, glue, bitterness and burning, decreased over the time.

In addition, the results showed that the brandies presented significant differences on flavour and odour profile, resulting from different wooden barrels and from different toasting levels of the barrels used for the maturation.

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