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P39 Volatile profile of 15 monovarietal white wines produced from grapes cultivated in a hot and dry region of Portugal

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Climate change trends and impacts could influence drastically the economy and the way that we produce or adapt cultures in near future. The higher air temperatures can modify the characteristics of wine, that depends on many factors, including the conditions they're grown in. Nevertheless, some varieties can be more adapted for these climate changes and produce high quality wines. The WineClimAdapt project (project code PDR2020-101-031010), study the adaptability of white grape varieties in the hottest and driest region of Portugal. In this context, fifteen varieties were used to produce monovarietal white wines. The white wines were vinified in the INIAV winery in duplicate and the volatile profile of the wines produced were screened by GC-MS and GC-FID.
Concerning the 35 compounds identified by GC-MS and quantified by GC-FID all exhibited significative differences when the wines were compared together.
From the 35 analysed compounds, the ones more relevant to distinguish the different wines were: ethyl 3-hydroxybutanoate; ethyl decanoate, butanoic acid, hexyl acetate and *cis*-3-hexenol. The monovarietal wines that presented a higher differentiation in their volatile profile were 'Riesling', 'Petit Manseng', 'Sarigo', 'Alvadurão' and 'Parellada'. This work pointed out the absence of varietal volatile compounds in all the wines and these results could be related with the hot and dry weather conditions in grape production. In general, the volatile profile is similar and the changes are detected in the concentration of each volatile compound.

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