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Polyphenolic metabolite profiling in less frequent red grape Uruguayan varieties

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Among the Uruguayan wines, those elaborated from *Vitis vinifera* cv Tannat are the most famous. Nevertheless, other less frequent grape varieties are now being introduced and employed in the wine production because of their colour contribution to wines.

The aim of this study was to determine, by means of HPLC-DAD/MSn, the pigment profiles of five red *Vitis vinifera* L. grape varieties cultivated in small vineyards in southern Uruguay (Montevideo and Canelones Provinces) in 2016 and 2017 vintages. The varieties were: Ancellota, Lacrima, Marselan (Grenache x Cabernet Sauvignon), Arinarnoa (Tannat x Cabernet Sauvignon), Egiodola (Abouriou x Tinta Negra Mole) and Caladoc (Malbec x Grenache). Seed extraction process was performed according García-Marino et al. (2006) [1] and the skin compounds according to Boido et al. 2011 [2]. The chromatographic separation, for targeted and untargeted analysis was performed with a Thermo Ultimate™ 3000 HPLC coupled to a Q-Exactive™ (Thermo Scientific) MS furnished with a heated electrospray source. The mass analysis was performed in negative ion mode following Barnaba et al. (2015) [3].

Nine targeted anthocyanidin derivatives, 5 of which were anthocyanins, and 66 untargeted glycosylated phenolic compounds [as hexose (32), deoxyhexose (7), hexose-pentose (1) and hexose-deoxyhexose (1)] were detected. PCA applied to phenolic profile of skin made it possible to properly characterize Caladoc, Egiodola, Ancellota and Lacryma Christi, and to reasonable well charaterise Arinarnoa and Marselan.

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References

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