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Título artículo: Four new wines from La Mancha region: Chemical characterization of oenological parameters, phenolic composition and volatile compounds.

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RESUMEN:

In this study, Carnelian, Barbera, Negro Amaro, and Limberger wines were obtained across two harvests from foreign red grape varieties cultivated in the La Mancha region. The results show that the general composition of all wines was in concordance with quality red wines from La Mancha region. The spectrophotometric method was employed to determine the main families of phenolic compounds and higher concentrations of these compounds were found in Carnelian wines. Free aroma compounds were isolated using solid-phase extraction (SPE), followed by analysis through gas chromatography-mass spectrometry (GC/MS). The GC-MS analysis of the wines identified 71 volatile compounds in Barbera wines and 58 free aroma compounds in Carnelian, Negro Amaro, and Limberger wines. The volatile compounds with the greatest capacity to introduce modifications in the aroma composition of the studied wines were (Z)-3-hexen-1-ol, 2-phenylethyl acetate, linalool, β -damascenone, phenylethyl alcohol, and butyric acid. This research presents the first comprehensive aromatic characterization of Carnelian, Barbera, Negro Amaro, and Limberger wines from the La Mancha region. The data suggested that these wines have great aromatic potential and can be considered viable alternatives to traditional grape varieties.