

Comparative study of virgin olive oil quality from single varieties cultivated in Chile and Spain

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Olive tree varieties that were cultivated only in the Mediterranean basin a few decades ago are now planted in the Southern Hemisphere as well. The chemical composition of the oils produced in countries as far distant as Spain and Chile are affected by differences in latitude and climate. In this work, seven monovarietal virgin olive oils from Chile (Arbequina, Barnea, Frantoio, Koroneiki, Leccino, Manzanilla and Picual) have been characterized by the chemical compounds responsible for taste (phenols) and aroma (volatiles). The oils were produced in five regions of Chile, and the concentration values of some chemical compounds were related to the geographical location of the olive tree orchards. Virgin olive oils from the major cultivars, Arbequina and Picual, were characterized in comparison with the same monovarietal oils produced in Spain. The concentration values of fourteen volatile compounds showed significant differences ($p < 0.05$) between the oils produced in Spain and Chile. C