

Influence of Maturation Degree of Arbutus (*Arbutus unedo* L.) Fruits in Spirit Composition and Quality

Authors : Goreti Botelho, Filomena Gomes, Fernanda M. Ferreira, Ilda Caldeira

Abstract : The strawberry tree (*Arbutus unedo* L.) is a small tree or shrub from botanical Ericaceae family that grows spontaneously nearby the Mediterranean basin and produce edible red fruits. A traditional processed fruit application, in Mediterranean countries, is the production of a spirit (known as aguardente de medronho, in Portugal) obtained from the fermented fruit. The main objective of our study was to contribute to the knowledge about the influence of the degree of maturation of fruits in the volatile composition and quality of arbutus spirit. The major volatiles in the three distillates fractions (head, heart and tail) obtained from fermentation of two different fruit maturation levels were quantified by GC-FID analysis and ANOVA one-way was performed. Additionally, the total antioxidant capacity and total phenolic compounds of both arbutus fruit spirits were determined, by ABTS and Folin-Ciocalteu method, respectively. The methanol concentration is superior (1022.39 g/hL a.a.) in the spirit made from fruits with highest total soluble solids, which is a value above the legal limit (1000 g/hL a.a.). Overall, our study emphasizes, for the first time, the influence of maturation degree of arbutus fruits in the spirit volatile composition and quality.

Keywords : arbutus fruit, maturation, quality, spirit

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