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PHYSICOCHEMICAL CHARACTERISTICS OF THE CROATIAN BLACKBERRY WINE

FIZIKALNO – KEMIJSKA KARAKTERIZACIJA KUPINOVOG VINA IZ HRVATSKIE

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The production of blackberry wine has been increasing in Croatia for years, but there is no available information or data on its physicochemical characteristics. The objective of this work was to evaluate the physicochemical composition of Croatian blackberry wines. Fifteen samples were collected during 2006 - 2007 and classified into two groups according to blackberry growing: conventional and organic samples. The eight physical and chemical characteristics of blackberry wines were estimated based on procedure described by OIV. The results obtained showed that relative density (20/20), ash, alkalinity of ash, reducing sugars, alcoholic strength by volume, pH, total acidity and total nitrogen in the studied blackberry wines were: 1.0017–1.0660, 1.59–4.11 g/L, 22.3–55.0 meq/L (or 1.54–3.80 g K₂CO₃/L), 13.5–177.6 g/L, 9.37–14.78 % vol, 3.11–3.56, 89.00–241.67 meq/L (or 6.68–18.13 g tartaric acid/L) and 69.05–347.13 mg N/L, respectively. Furthermore, total acidity and total nitrogen data sets were non-normally distributed and accordingly non-parametric statistics was applied. To sum up, the main physicochemical parameters analyzed demonstrated that blackberry wine represent a high quality beverage and all components tested have in general contents below the maximum concentration admissible.

keywords: blackberry wine, functional food, physical and chemical characteristics
BLACKBERRY WINE AS A GOOD SOURCE OF ESSENTIAL MINERAL NUTRIENTS
KUPINOVO VINO – DOBAR IZVOR ESENCIJALNIH MINERALA

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Blackberry wine is a popular alcoholic beverage in Croatia and mainly produced in the continental part of the country. Traditionally, this fruit wine has been used as a popular medicine for anaemia and the iron deficiency. The aims of this study were to evaluate the mineral content in Croatian blackberry wines and investigate whether this kind of wines are a good source of essential mineral nutrients. Fifteen samples were collected during 2006 - 2007 and classified into two groups according to blackberry growing: conventional and organic samples. The mineral content of investigated blackberry wines was determined using FAAS/FAES after dry ashing procedure. The concentrations of potassium, sodium, calcium, magnesium, iron, copper, manganese and zinc were between (in mg/L) 564 - 2014, 57.84 – 212.60, 109.7 – 205.1, 69.6 – 175.5, 1.10 – 8.41, 0.085 – 0.490, 0.96 – 8.03 and 0.557 – 3.569, respectively. According to the content found, minerals were classified in two categories: the main group including K, Na, Mg, Ca, and the secondary set consisting of Fe, Mn, Cu and Zn. In regard to the obtained results, Croatian blackberry wines could be considered health safe and as a good additional source of investigated essential nutrients.

keywords: blackberry wine, essential mineral nutrients, functional food