

Phytochemical characterization of bay laurel (*Laurus nobilis* L.) essential oils in Croatia

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Abstract

Within the research project entitled as “Taxonomy, Ecology and Utilization of Carob tree (*Ceratonia siliqua* L.) and Bay laurel (*Laurus nobilis* L.) in Croatia” acronym: TEUCLIC, grant number: IP-11-2013-3304-TEUCLIC, financed by Croatian Science Foundation, a phytochemical characterization of Bay laurel essential oils was studied in seven distinct populations of Croatian Adriatic region, such as: Lovran, Cres, Split, Hvar, Mljet, Dugi Otok and Žirje. The results of gas chromatography–mass spectrometry (GC-MS) analyses shows the highest content of 1,8-Cineole within the analysed samples of all populations, and its content vary between maximally 58.13 to minimally 38.94 %. Than follows linalool whose content vary between maximally 18.33 to minimally 1.99 %, terpinyl acetate, methyl eugenol, α -terpineol and terpinen-4-ol, β -pinen, etc. On the other hand, the content of myrcene is lower than 1 % and varies from only 0.26 % to maximally 0.69 %. Generally, the southern populations of Bay laurel have a higher content of the same components of essential oils in the comparison with the northern populations. However, the content of essential oils depends not just of geographic position of the population, but also of the season and date of leaves sampling.

Key words: Bay laurel, *Laurus nobilis*, essential oils, phytochemical characterization