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PP57. Oil yield and composition of *Juniperus oxycedrus* L. from Bulgaria and Serbia

Ivanka Semerdjieva[1]*, Valtcho D. Zheljazkov[2], Dragoja Radanović[3], Tatjana Marković[3], Albena Stoyanova[4], Tzenka Radoukova[4], Ivayla Dincheva[5], Tess Astatkie[6]

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Juniperus oxycedrus L. (Cupressaceae) is widely distributed in countries with a Mediterranean climate. The species is known for its large morphological and chemical variation and its debatable taxonomic status. The objective was to compare the essential oil content and composition of *J. oxycedrus* plants from Bulgaria and Serbia, and secondly, to quantify morphological variations of leaves. The essential oil content in dried juniper leaves varied from 0.059% (Kopaonik, Serbia) to 0.240% (Markovo, Bulgaria). Around 40 EO constituents were identified, belonging to the groups of monoterpenes, sesquiterpenes, diterpenes, and phenylpropanoids. The monoterpene hydrocarbons and oxygenated monoterpenes were the predominant groups of compounds representing 36.8-66.2% of the total oil, with α-pinene, limonene, sabinene, β-pinene, β-myrcene being the major constituents of this group. Overall, α-pinene was the major oil constituent in plants from all locations. The second largest group was the one of sesquiterpenes (sesquiterpene hydrocarbons, oxygenated sesquiterpenes), ranging from 19.3 to 33.6%. There was no significant difference between the mean leaf width of the six combinations of location and tree sex, and the overall mean width was 1.24 mm. However, there was a significant difference between the mean leaf lengths. This study contradicts recent reports that the European populations of *J. oxycedrus* east of Italy belong to a newly identified species *J. deltoides*. The same reports claimed that ”the leaf oil of *J. deltoides* was lower in α-pinene and higher in limonene compared to *J. oxycedrus”*. In this study, none of the studied populations had a higher concentration of limonene than that of α-pinene. Therefore, this study demonstrated that the flora of the two countries includes indeed *J. oxycedrus*.

[1]Agricultural University, 4000 Plovdiv, Bulgaria; [2]Oregon State University, Corvallis, OR 97331, USA; [3]Institute for Medicinal Plant Research “Dr Josif Pančić”, Tadeuša Košćuška 1, 11000 Belgrade, Serbia; [4]University of Plovdiv Paisii Hilendarski, 4000 Plovdiv, Bulgaria; [5]AgroBioInstitute, Agricultural Academy, 1164, Sofia, Bulgaria; [6]Dalhousie University, PO Box 550, Truro, NS, Canada B2N 5E3.
**Corresponding author*: v_semerdjieva@abv.bg