

PP65. Essential-oil composition of *Zygophyllum fabago* aerial parts from Turkey

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There are many reports in the literature, related to the essential oil of *Zygophyllum* species (*Zygophyllaceae*), but several reports describe the antioxidant activity of this genus. Previously, sesquiterpene hydrocarbons and diterpenoids were reported from *Zygophyllum fabago* L. as the main components [1]. Current research aims to provide information on the essential-oil composition of *Z. fabago* collected from Ankara, Turkey. The essential oil was obtained by hydrodistillation from air-dried aerial parts of the plant with a Clevenger apparatus for 3 h. The essential oil yield of the plant was in trace amount. The oil was recovered with *n*-hexane (1 mL) and dried over anhydrous Na₂SO₄. The essential oil was analyzed without further dilution and used in the GC-MS analysis. The essential oil was analyzed with an Agilent 5977 MSD GC-MS system operating in EI mode; injector and MS transfer line temperatures were set at 250 °C. Splitless injection was used in the analysis. Innovax FSC column (60 m x 0.25 mm, 0.25 μ m film thickness) and helium as the carrier gas (1 mL/min) were used in GC-MS analyses. The oven temperature program was: 60 °C for 10 min and then raised to 220 °C at a rate of 4 °C/min, afterwards the temperature was kept constant at 220 °C for 10 min and then raised to 240 °C at a rate of 1 °C/min. Mass spectra were recorded at 70 eV with the mass range *m/z* 35-425. Relative amounts of the separated compounds were calculated from the integration of the peaks in MS chromatograms. Identification of essential-oil components was carried out by comparison of their retention indices (RI), relative to a series of *n*-alkanes (C₅ to C₃₀), with the literature values, as well as by mass spectral comparison. The aerial parts essential oil of *Z. fabago* yielded an essential oil rich in oxygenated monoterpenes and diterpenes. The major components of the essential oil were: (*E*)-phytol (11.7%), (*E*)- β -damascenone (10.1%), farnesyl acetone C (5.1%), dihydromethylionone (3.9%), (*E*)-geranyl acetone (3.7%), γ -decalactone (3.6%), (*E*)- β -ionone (3.3%), pentacosane (3.4%), hexahydrofarnesyl acetone (2.5%), and hentriacontane (2.8%).

References:

[1] Yaripour, S. et al., 2017. *Adv. Pharm. Bull.* 7, 109–114.

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