

PP24. Essential-oil composition of *Isatis floribunda* Boiss. ex Bornm. aerial parts from Turkey

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There is just one article in the literature in regard to the essential-oil composition of *Isatis floribunda* Boiss. ex Bornm. (Brassicaceae). Previously, a flower and root extract of *I. floribunda* was reported to be rich in phenolic compounds, especially chlorogenic acid, *p*-coumaric acid and quercetin [1]. The current study aims to provide information about the essential-oil composition of aerial parts of *I. floribunda*. *Isatis floribunda* was collected from Ankara-Beypazarı. The essential oil was obtained by hydrodistillation of the air-dried aerial parts using a Clevenger apparatus for 3 h. The essential-oil yield was 0.03 mL per 100 g of plant material. The essential oil was trapped in *n*-hexane (1 mL) dried over anhydrous Na₂SO₄ and analyzed directly by GC-MS without further dilution. 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. Innowax FSC column (60 m x 0.25 mm, 0.25 µm 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 *I. floribunda* yielded an essential oil that is rich in *n*-alkanes and saturated fatty acids. The major components of the essential oil were dodecanoic acid (28.6%), nonacosane (11.0%), hexadecanoic acid (10.0%), tetradecanoic acid (8.4%), methyl octadecanoate (4.8%), decanoic acid (4.6%), and hexahydrofarnesyl acetone (3.5%). We believe our study will stimulate further research on the chemistry of this species.

References:

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