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PP104. The essential-oil composition of *Crocus pestalozzae* Boiss. from Istanbul

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Crocus (Iridaceae) species are well-known for their use as spices. In Turkey, the genus *Crocus* is represented with 62 taxa. In the literature, there is no particular report on the chemistry of volatile or non-volatile secondary metabolites of *C. pestalozzae* Boiss. The aim of the current study was to contribute novel information on the chemistry of the volatile secondary metabolites of *C. pestalozzae*. The plant material used in this study was collected from Kanuni Sultan Süleyman City Forest in Istanbul in January 2016. The essential oil of air-dried aerial part of *C. pestalozzae* was obtained by hydrodistillation (3 h) using a Clevenger-type apparatus. The obtained essential-oil yield was below 0.01 mL. The essential oil was trapped in *n*-hexane (1 mL) and dried over anhydrous Na_2SO_4. The essential oil was analyzed 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, afterward 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 (C_5 to C_{30}), with the literature values, as well as by mass spectral comparison. Fifty-four compounds were identified representing 86.2% of the detected oil constituents. The main components of the oil were heptacosane (18.2%), pentacosane (17.0%), nonacosane (13.1%), heneicosane (7.2%), and 1-docosanol (5.3%). Safranal and its derivatives were detected in the essential oil but only in very small amounts. Due to the low amounts of safranal and other commonly observed volatile compounds of *Crocus* species [1], one would expect to observe a different volatile secondary metabolite profile if headspace or SPME sampling were employed.

Reference:
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