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ESSENTIAL OIL COMPOSITION OF *NEPETA MAHANENSIS* AND *NEPETA BRACTEATABENTH.*

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The genus *Nepeta*, one of the largest genera of the Lamiaceae family comprises nearly 300 herbaceous perennial, rarely annual species most of which are spread out over the world. One of the greatest diversity and richness of species is found in South western Asia, and especially Turkey and Iran [1]. Iran, particularly, is one of the centers for *Nepeta* (common Persian name is *Pune-sa*) with about 75 species, and approximately 53% of endemics [2]. Several *Nepeta* species are used in folk medicine as diuretic, diaphoretic, antitussive, antispasmodic, anti-asthmatic, febrifuge, emmena-gogue, and sedative agents, and for the antiseptic and astringent properties as topical remedy in children with cutaneous eruptions, and for snake and scorpion bites. Some species are used as medicinal herbs in Iran, for example, *N. ispahanica*, *N. binaloudensis*, *N. bracteata*, *N. pogonosperma*, and *N. pungens*, while *N. crispa* is used as a culinary herb [3]. *Nepeta mahanensis* is an endemic plant species that was first recorded in 2003 [2]. The aim of this work was to characterize the chemical composition of the essential oils of two native *Nepeta* species of Iran. Dried areal parts of each plant were subjected to hydrodistillation for 2h, using a Clevenger-type apparatus. The obtained essential oils were dissolved in n-pentane, dried over anhydrous sodium sulfate and were stored until analysis. The oils were analysed by GC-MS. Twenty components were identified in the oil of *N. mahanensis* with 1,8-Cineole (43.09%), 1-Acetoxy-myodesert-3-ene (20.47%) and β -Pinene (8.41%) as main constituents. Twenty-six compounds were characterized in the oil of *N. Bracteata Benth.* with D-Limonene (4.76%), (R)-(+)-Pulegone (7.17%), β -Caryophyllene (9.96%), Caryophyllene oxide (12.25%), Bicylogemacrene (13.16%), and Germacrene D (14.74%) as the most abundant components. According to the results of previous study, the isomers of nepetalactones were the main components of *N. mahanensis* [4], however, in this study for the first time it has been shown that 1,8-Cineol and 1-Acetoxy-myodesert-3-ene are the main components of *N. mahanensis* oil. The high amount of 1,8-Cineole in the oil of *N. mahanensis* is remarkable. Potential activities of this essential oil component have been showed against *Helicobacter pylori*, Gram-negative or Gram-positive bacteria and some fungi [1]. Therefore these results support the traditional usage and also possible use of *Nepeta* volatile oils in pharmaceutical industry.

References

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