

PP109. The composition of the essential oil of the aerial parts of an endemic new species *Ferula mervynii* Sağıroğlu & H.Duman from Turkey

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In 2007, *Ferula mervynii* Sağıroğlu & H.Duman (Apiaceae) was reported as a new species from Turkey. This species finds a natural habitat in Artvin and Erzurum regions that are located in North-Eastern Anatolia [1]. Up to now, there are no reports on the chemistry of this species. However, there are many reports on the essential-oil composition of other *Ferula* species from Turkey. As an example, *F. elaeochytris* Korovin essential oil was reported to have nonane (27.1%), α -pinene (12.7%), and germacrene B (10.3%) as the main components [2], whereas, *F. szowitziana* D.C. was reported to contain β -eudesmol (32.0-29.5%), α -eudesmol (18.2-16.6%), and α -pinene (8.6-6.4%) as the major components of the leaf and stem oils, respectively [3]. The current study aimed to provide information on the chemistry of the essential oil of *F. mervynii* collected from Erzurum, Turkey, in August 2017. The essential oil was obtained by hydrodistillation from air-dried aerial parts of the plant using a Clevenger-type apparatus in the duration of 3 h. The essential-oil yield was determined to be 0.56% (v/w). The oil was diluted with *n*-hexane 1:10 (v/v) and analyzed as such on an Agilent 5977 MSD GC-MS system. 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 *F. mervynii* was rich in monoterpenes. The major components were α -pinene (48.1%), sabinene (20.0%), β -pinene (11.6%), and terpinen-4-ol (2.5%). The highest AChE-inhibitory activity of the oil was found to reach 51±1% of inhibition of the enzyme activity.

References:

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