

B069 The essential oil of wild carrot aerial parts from Corsica

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Daucus carota L., which belongs to the Umbelliferae family, is a tall robust annual spiny-fruited herb growing wild in dried-out fields or meadows. It is native to Europe and is the precursor of the cultivated carrot.

A review of the literature reveals that the volatiles of the carrot umbels have been the subject of only one study in which the authors identified one hundred components by GC and GC/MS (1). The essential oil is characterised by high contents of monoterpene hydrocarbons, α -pinene, sabinene, myrcene and limonene being the major components.

In our present study, we report the chemical composition of a collective oil of wild carrot aerial parts from Corsica. The identification of compounds has been carried out by ^{13}C NMR spectroscopy according to an original method created in our laboratory (2). It consists of identifying the individual components of a complex mixture using ^{13}C NMR spectroscopy without previous separation. This method allows the direct identification of the main components of essential oils and extracts. The quantification of these components is carried out by GC/RI (Retention Indices).

The corsican essential oil exhibited a quite different composition with polish oil: the major constituents are two phenylpropanoids: (*E*)-iso methyl eugenol (33%) and elemicin (11.4%), and a monoterpene hydrocarbon, α -pinene (24.9%).

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B070 Composition of essential oil of wild and cultivated *Satureja khuzestanica*

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Satureja khuzestanica (Persian name: Marzeh Khozestani) is an endemic plant of Iran that is widely distributed in southern part of Iran. It is renowned as analgesic and antiseptic in folk medicine (1-3). In this research, the composition of the essential oil of the aerial parts, obtained by hydrodistillation using a Clevenger type apparatus, was determined using GC-MS. Varian 3400 GC with a CP Sil DB1 column, 60m x 0.25 mm, combined with a Varian MAT (70 eV) temperature programmed, 4°C/min from 50 to 250°C, with He as the carrier gas was used. Identification of components was based on comparison of their retention times with those of analytical standards of available terpenoids, and matching mass spectral data of oil constituents according to the literature (4,5). The major constituents of the oil were carvacrol (90%), eugenol (3.6%), 2-methoxy-4-isopropylphenol (1%) and *p*-cymene (0.8%). The remaining compounds (thirteen components) were less than 0.7%.

The major constituents of the cultivated plant were carvacrol (81%), *p*-cymene (5%), myrcene (1.5%), γ -terpinene (2%), and 4-terpineol (2%). The remaining 19 components were less than 1%.

In both, the wild and cultivated plant, carvacrol was the major component. However, either the percentage or the structure of other major components were not the same.

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