

## PP85. Composition of the essential oil of fennel (*Foeniculum vulgare* Mill.) fruits from Serbia

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Fennel (*Foeniculum vulgare* Mill.) is a renowned aromatic plant species belonging to the Apiaceae family. Apart from being an ingredient of pharmaceutical and cosmetics products, fennel fruit essential oil is used to flavor liqueurs, bread, pickles and pastries [1]. Many phytochemical studies have been conducted so far to investigate the chemical composition of the essential oil of fennel of different origin, but only few from Serbia [1,2]. The present paper focuses on the chemical composition of the essential oil of fennel fruits (schizocarps) from Serbia. The essential oil, obtained by hydrodistillation carried out using the original Clevenger apparatus, was characterized by gas chromatography (GC) and gas chromatography/mass spectrometry (GC-MS). The oil was obtained in a yield of 1.61% (w/w). In total, 14 components were identified, accounting for more than 98% of the detected total peak areas. *trans*-Anethole (91.4%), a phenylpropanoid, was found to be the main component. Limonene (5.1%) was the second most abundant compound detected, followed by fenchone (2.2%), while all others were found to be the minor contributors. The chemical profile from the present study was similar to the previously reported results [1,2]. In our investigation, the concentration of *trans*-anethole was similar to that in the Coşge and co-workers' study, while the essential oil contained significantly more limonene and fenchone compared to the same work [3]. This could be the effect of genetic structures and ecological conditions affecting the plant. Agricultural practices also have critical effects on the yield and oil composition in essential-oil crops, significantly varying the percentage of main components [4].

### References:

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