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Research Article

Comparison of Essential Oils Composition leaf of *Satureja bachtiarica Bunge*. in Field and Provenance

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Abstract

Satureja bachtiarica Bunge. from the Lamiaceae family is an endemic plant that is widely distributed in southwestern Iran. In this study, The aerial parts of six wild populations of *S. bachtiarica*. were collected from various natural habitats, from Fars province and the plants obtained by dividing were planted in October. The experimental design was performed as a factorial in the form of randomized complete randomized blocks. Their essential oils (Eos) were analyzed by GC-FID and GC-MS. EO yields were from 1.1 to 2.4 % (w/w) based on dried material. The major constituents of

the EOs were thymol (10.9–49.8 %), carvacrol (1.1–49.7 %), p-cymene (18.0–32.8 %), in provenance and thymol (11.2–51.4 %), carvacrol (0.5–47.8 %), p-cymene (18.8–35.4 %), γ-terpinene (5.7–8.4 %), linalool (3.8-6.1 %) in field condition. The EOs from *S. bachtiarica* were rich in monoterpenoids, especially oxygenated phenolic monoterpenes. Among six populations, the EOs from the Kohanjan and Abadeh-Didegan populations had the highest thymol and carvacrol amount (49.8 and 49.7 %), respectively. In total, two chemotypes, including thymol and carvacrol were determined for *S. bachtiarica*. The ecotypes with high thymol such as kohenjan and Mok-firouzabad have low carvacrol.

Keywords: *Satureja bachtiarica* | Essential oil | Chemotype | Oxygenated Monoterpenes

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