

عنوان مقاله:

Extraction and determination of content and composition of essential oils of vegetative and reproductive organs of *Zataria multiflora*

محل انتشار:

مجله فرآیند و کارکرد گیاهی، دوره 11، شماره 49 (سال: 1401)

تعداد صفحات اصل مقاله: 7

نویسندگان:

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خلاصه مقاله:

Zataria multiflora is one of the valuable medicinal plants belonging to the Lamiaceae family. The aromatic aerial parts of this species are traditionally used by endemic folks to flavor some native foods, also for numerous therapeutic functions. In the present study, different plant organs (leaf, flower, stalk and whole aerial organ) were collected from Fanuj region of Sistan & Balouchestan province, in the southeast of Iran, and the variability in the essential oil contents and compositions of them were studied. The essential oils of air-dried samples were extracted by hydro-distillation. The experiment was arranged in a completely randomized design with three replications for the essential oil contents. The essential oil yields were calculated based on dry weight and the oils were analyzed by a combination of GC-FID and GC-MS techniques, to check for chemical variability. The essential oil yields of leaf, flower, stalk and aerial part were ۴.۸, ۵.۳, ۰.۶ and ۲.۷ % (w/w), respectively. The total number of compounds identified and quantified were ۱۷ in leaf, ۱۷ in flower, ۱۹ in stalk, and ۱۹ in whole aerial organ, representing ۹۹.۰, ۹۹.۲, ۹۷.۳, and ۹۶.۲% of the total essential oil, respectively. Results of essential oil compound analysis demonstrated that thymol (۳۱.۰ – ۶۷.۱ %), carvacrol (۸.۴ – ۳۶.۷ %) and p- cymene (۶.۵ – ۲۳.۲ %) were the main compounds in the evaluated plant organs of *Z. multiflora*. Chemical diversity of the essential oil of *Z. multiflora* plant parts can be considered by medicinal plants breeders and pharmaceutical, food and cosmetic industries for breeding and processing uses.

کلمات کلیدی:

Chemical variation, Essential oil, Plant organ, Thymol, *Zataria multiflora*, شیرازی، اسانس، اندام گیاه، تنوع شیمیایی، تیمول.

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