

عنوان مقاله:

Essential oil components, phenolic content and antioxidant activity of *Anthriscus cerefolium* and *Anthriscus sylvestris* from Iran

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خلاصه مقاله:

Purpose: The Apiaceae family (Umbelliferae) is one of the largest families of flowering plants. The genus *Anthriscus* of this family is considered of high importance because of its use in folk medicines and flavoring throughout the world. Three species of this genus are represented in the Flora of Iran. The main objective of this study was to evaluate the essential oil composition, phenolic content and antioxidant activity of *Anthriscus cerefolium* and *Anthriscus sylvestris*. **Research Method:** The essential oil samples were isolated by hydrodistillation in a Clevenger type apparatus and analyzed using GC and GC-MS methods. The antioxidant activity and total phenolic content were determined by DPPH scavenging assay and Folin-Ciocalteu method, respectively. **Findings:** Oxygenated monoterpenes constituted the principal fraction of essential oils obtained from *A. cerefolium* (rich in estragole), while aliphatic esters were detected to be the main class of compounds isolated from *A. sylvestris* (rich in chrysanthenyl acetate). Among the essential oils and methanolic extracts from two *Anthriscus* species at vegetative stage the highest antioxidant activity was observed for essential oil of *A. sylvestris* (IC₅₀=71.3 µg.ml⁻¹) followed by essential oil of *A. cerefolium* (IC₅₀=115 µg.ml⁻¹). In addition, the amounts of total phenolic contents of *A. cerefolium* and *A. sylvestris* methanolic extracts at full flowering stage (76.7 and 74.6 mg GAE.L⁻¹) were determined. Other important group of compounds and their biological properties needs to be studied in *Anthriscus* species due to their potential pharmacological and food industry value. **Research limitations:** No limitations were founded. **Originality/Value:** Since the essential oil of *A. sylvestris* at vegetative stage demonstrated the noticeable antioxidant ability which makes it well qualified to be used .as natural ingredients to synthetic antioxidants in food industry

کلمات کلیدی:

Anthriscus cerefolium, *Anthriscus sylvestris*, Free radical scavenging, Total phenols

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