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Essential Oil Compounds and Antioxidant Activity for α-Thujene Rich Two Species of Artemisia

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Abstract : Although Artemisia species are one of the most important medicinal plants, there are a few reports on chemistry or activity of their essential oils because of low amounts of the oils in this genus. In this study, chemical composition of essential oils leaves and stems of Artemisia sieberi and Artemisia aucheri growing wild in Kashan rangelands, central Iran, have been analyzed using GC–MS technique. Analysis revealed 50 identified compounds, representing 96.55% of the oil and 23 identified compounds representing 97.83% of the oil on Artemisia sieberi and Artemisia aucheri respectively. The yield of essential oil extraction is very higher than those of previous reports. In both plants α-thujene is the main component in both of them, with an extra value, 74.42%, in aucheri species. Several compounds (some with significant compositions), were found in these varieties of Artemisia which are not recorded in previous literature. Antioxidant activities of the essential oils were evaluated for the first time in this research work using β-carotene/linoleic acid assay and found to be surprisingly attributed directly to α-pinene contents in them.

Keywords : essential oil, artemisia aucheri, artemisia sieberi, α-thujene, antioxidant activity
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