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Isolation and structure elucidation of new cyclohexenones from *Anthemis odontostephana* Boiss.

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Background and Aims: The genus Anthemis, which belongs to the Asteraceae family, consists of about 200 species. Thirty-nine species of the genus Anthemis are found in Iran, of which fifteen are endemic. Previous phytochemical analyses of Anthemis spp. have confirmed the occurrence of sesquiterpene lactones, flavonoids and polyacetylenes. Anthemis spp or their pure constituents have shown several pharmacological effects such as antimicrobial, antiprotozoan, cytotoxicity, anti-inflammatory, anti-diuretic and antispasmodic effects.
Methods: The flowers of A. odontostephana Boiss. were collected from Mazraeno in Yazd province, central Iran. Air dried flowers were extracted with acetone using maceration method and the solvent was evaporated. Repeated open reverse and normal phase column choromatographies and HPLC runs using methanol: H2O, heptane: ethylacetat and dichloromethane: methanol as mobile phases resulted in isolation of some new cyclohexenone derivatives. The structures of these compounds were elucidated using 1HNMR, 13CNMR, 2DNMR and Mass spectra.
Results and Conclusions: Cyclohexenones derivatives are relatively rare compounds in plants and usually isolated from fungi, bacteria, worms and mushrooms. However, some cyclohexenones such as Antheminone A and D from the flowers of A. odontostephana Boiss. were isolated and their structures elucidated.

Keywords: Asteraceae; *A. odontostephana*; Cyclohexenone; Antheminone D; 2DNMR