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Original Article

GC-MS analysis of *Ornithogalum procerum*

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Abstract:

ABSTRACT

Background and objectives: *Ornithogalum procerum* Stapf. (Family: Liliaceae) is an Iranian medicinal plant found mainly in the east Azarbaijan province of Iran. As part of our on-going phytochemical and bioactivity studies on medicinal plants from Iranian flora, various extracts and essential oils of this plant were analysed by GC-MS.

Methods: The hydrodistillation of the ground aerial parts of *O. procerum*, Soxhlet-extraction of the dried and ground bulbs, and the hydrolysis of the methanol extract of the bulbs yielded, the essential oils, *n*-hexane extract and the hydrolysed methanolic extract respectively, which were analysed by the GC-MS.

Results: A total of 23 compounds were identified from the essential oils of the the aerial parts. The identified compounds represented 70.27% of the total essential oils. The main components of the aerial parts were phenylacetaldehyde (7.57%), hexahydrofarnesyl acetone (8.13%), docosan (5.52%) and 5-methyl octadecane (4.63%). From the *n*-hexan extract of the bulbs, seven hydrocarbons representing 99.39% of the total extract, were identified. Finally, from the hydrolyzed methanolic extract of the bulbs, four polysterol-type compounds accounting for 59.81% of the extract, were detected.

Conclusion: The GC-MS analyses revealed that the essential oils are mainly composed of oxygenated hydrocarbons, the *n*-hexane extract contains predominatly hydrocarbons, and the hydrolyzed methanolic extract comprises polysterol-type compounds.

Keywords:

[Ornithogalum procerum](#), [Liliaceae](#), [Essential oils](#), [Terpenoids](#), [Phytosterols](#)

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