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Antimicrobial effect of essential oil of *Artemisia kermanensis* on water by HPC method

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Background and Aims: The aromatic plant of Artemisia kermanensis is an important medicinal plant in the south of Kerman. The essential oil of aerial parts of this plant contains variety of components with different antimicrobial effects. The purpose of this study was to examine of the antimicrobial effects of essential oils of aerial parts of A.kermanensis (which is endemic to earth of Iran) by HPC method.
Methods: The plant of this research collected of Faryab Mountains in Kahnooj. Chemical composition of the essential oils of aerial parts of A.kermanensis was analyzed by Gas Chromatography-Mass Spectrometry (GC-MS). The effectiveness of this essential oil in different dilution was estimated in HPC method with 0.1, 0.2, 0.3, 0.4, 0.5, 1.0 & 1.5 ml on microorganism in water.
Results: The GC-MS analysis of the essential oils has been led to the identification and quantification of 41 components, the most abundant of them were 1, 8- Cineole (26.93%). Other compounds present (Camphor, alpha-Thujone, Borneol and alpha-Terpineol) have been reported to have antimicrobial effects on bacteria and fungi. This essential oil in 0.2 ml concentration could eliminate microorganism in water.
Conclusions: This study showed that the essential oil of aerial parts of A.kermanensis has antimicrobial activity on microorganism in city-water and we can use this essential oil for eliminate microorganism in water.

Keywords: *Artemisia kermanensis*; Antimicrobial; Essential oil; HPC Method