

Antibacterial and Antioxidant Properties of Artemisia herba-alba Asso Essential Oil Growing in M'sila, Algeria

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Abstract : There is an increasing interest in phytochemicals as new source of natural antioxidant and antimicrobial agents. Plants essential oils have come more into the focus of phytomedicine. Many researchers have reported various biological and/or pharmacological properties of Artemisia herba alba Asso essential oil. The present study describes antimicrobial and antioxidant properties of Artemisia herba alba Asso essential oil. Artemisia herba alba Asso essential oil obtained by hydrodistillation (using Clevenger type apparatus) growing in Algeria (M'sila) was analyzed by GC-MS. The essential oil yield of the study was 0.7 %. The major components were found to be camphor, chrysanthenone et 1,8-cineole. The antimicrobial activity of the essential oil was tested against four bacteria (Gram-negative and Gram-positive) and one fungi using the diffusion method and by determining the inhibition zone. The oil was found to have significant antibacterial activity. In addition, antioxidant activity was determined by 1,1-diphenyl-1-picrylhydrazyl (DPPH) assay, ferric reducing (FRAP) assay and β -carotene bleaching test, and high activity was found for Artemisia herba-alba oil.

Keywords : Artemisia herba-alba, essential oil, antibacterial activity, antioxidant activity

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