Essential Oil Composition and Antimicrobial Activity of *Diplotaenia damavandica*

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Antimicrobial activity of the essential oils obtained from leaves, root and the seeds of *Diplotaenia damavandica* Mozaffarian, Hedge & Lamond, an endemic plant to Iran, was determined against 10 microorganisms using the disk susceptibility test as well as measuring minimum inhibitory concentrations. The results showed that all three oils had antibacterial activity against *Bacillus subtilis, Staphylococcus aureus, Staphylococcus epidermidis* and *Escherichia coli*. The essential oil from the leaves had the highest antimicrobial activity against all test microorganisms including the fungal strains. The essential oils compositions were analyzed and determined by GC and GC-MS. The oils analyses resulted in the identification of 16, 17 and 20 compounds representing 94.2%, 96.4% and 95.1% of the total oils, respectively. The main components of the leaf essential oils were (*Z*)-β-ocimene (21.6%), α-phellandrene (21.3%) and terpinolene (20%). Dill apiol (30.1%) and γ-terpinene (16.2%) were the main components of the root and seed essential oils, respectively.

Key words: Antimicrobial Activity, Essential Oil Compositions, *Diplotaenia damavandica*