

Evaluation of the *in vitro* antioxidant activity of polar and non polar extracts from *Perovskia atriplicifolia* Benth.

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Background and Aims: The present study was conducted to evaluate the *in vitro* antioxidant properties of polar and non polar extracts from aerial part of *Perovskia atriplicifolia* Benth.

Methods: The total extract of the plant was obtained in methanol and fractionated to two polar (water soluble) and non-polar (chloroform soluble) parts. The antioxidative potential of the samples was evaluated using two different.

Methods: a) inhibition of 2,2-diphenyl-1-picryl hydrazyl (DPPH) stable free radical, b) β -carotene-linoleic acid assay.

Results: The polar subfraction of the methanol extract showed major effectiveness in DPPH assay with an IC₅₀ value of 29.94 ± 0.03 $\mu\text{g/ml}$, comparable to that of synthetic standard antioxidant butylated hydroxy toluene (BHT, IC₅₀= 19.8 ± 0.5 $\mu\text{g/ml}$). In the β -carotene/linoleic acid assay, non polar sub-fraction of the methanol extract was exhibited the highest linoleic acid oxidation inhibition percentage (70.19%) which was only slightly lower than that shown by BHT (84.53%).

Keywords: *Perovskia atriplicifolia*, Antioxidant activity, β -carotene-linoleic acid assay, DPPH