عنوان مقاله:

Antioxidant activity and total phenolic content of Boerhavia elegans (choisy) grown in Baluchestan, Iran

محل انتشار:

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نویسندگان:

Zahra Sadeghi - *Department of Production and Utilization of Medicinal Plants, Faculty of Agricultural and Natural Resources, Higher Educational Complex of Saravan, Saravan, I. R. Iran*

Jafar Valizadeh - *Department of Biology, University of Sistan & Baluchestan, Zahedan, I. R. Iran*

Omid Azyzian Shermeh - *Department of Biology, University of Sistan & Baluchestan, Zahedan, I. R. Iran*

Maryam Akaberi - *Biotechnology Research Center and School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, I. R. Iran*

خلاصه مقاله:

Objective: Boerhaavia elegans L. (Nyctaginaceae) is a medicinal plant used for the treatment of kidney disorders, urinary tract disorders and blood purification in Baluch tribe. The aim of present study is to evaluate the antioxidant propertyof B. elegans species for the first time. Materials and Methods: Different parts (leaf, stem and fruit) of the plant were extracted by using various solvents (water, methanol, chloroform and ethyl acetate) and evaluated for their antioxidant activity using DPPH (2, 2-diphenyl-1 picryl hydrazyl) and FRAP (ferric reducing antioxidant power) methods. In addition, total phenolic content was determined by Folin–Ciocalteu reagent. Results: Antioxidant results were expressed as IC50. The antioxidant power in DPPH and FRAP assay were evaluated as shown in decreasing order: Methanolic extract > Aqueous extract > Ethyl acetate extract > Chloroform extract, for all parts of the plant. In both methods of antioxidant assay and Folin-Ciocalteu method, methanolic extract of leaf exhibited the highest activity and the most phenolic content IC50= 6.85ppm and 16.41 mg GA/g d w respectively. Total phenolic content had a positive relationship with antioxidant capacity in extracts and there was a high correlation ($r=1.00$, $p<0.01$) between antioxidant activities as determined by both antioxidant assays for various parts. Conclusion: The results of the experiments showed that B. elegans extract had significant antioxidant effects. This high antioxidant activity may be linked to phenolic contents of the plant but complementary investigations are suggested in order to determine active elements.

کلمات کلیدی:

Boerrhavia elegans, Antioxidants, DPPH, FRAP, Total phenolic content