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Antioxidant Activity and total Phenolic content of Aerial Parts of Borago officinalis and Echium amoenum different fractions

Nafiseh Khosravi Dehaghi[۱, ۲*], Khadijeh Mahmoodi[۲]
[۱]Evidence-based Phytotherapy & Complementary Medicine Research Center, Alborz University of Medical Sciences, Karaj, Iran
[۲]Department of Pharmacognosy, School of Pharmacy, Alborz University of Medical Sciences, Karaj, Iran

Abstract
Borago officinalis (Boraginaceae) is a medicinal plant with different components such as Phenolic compounds, flavonoides, rosmarinic acid, pyrrolizidine alkaloids, etc. It is used as anticonvulsant, bronchodilator and vasodilator. Echium amoenum (Boraginaceae) is a medicinal plant that is used in anxiety and depression. Different compounds such as Pyrrolizidine alkaloids, rosmarinic acid were isolated from its extracts. The aim of this study is elucidating the antioxidant activity of Borago officinalis and Echium amoenum different fractions by DPPH assay. Total phenolic contents of these plants fractions were determined spectrophotometrically using Folin-Ciocalteau reagent. This study showed that Borago officinalis ethyl acetate fraction (۷۹.۲۱±۰.۲۳ µg GAE/mg dry Fraction) and Echium amoenum methanolic fraction (۱۰۶.۲۳ ± ۰.۶۰ µg GAE/mg dry Fraction) contained highest total phenolic content. IC_{50} of Borago officinalis ethyl acetate fraction (۶۳.۴۷ ±۰.۰۷ µg/ml) and Echium amoenum methanolic fraction (۳۹.۰۴±۰.۵۱ µg/ml) were the best. This study showed that phenolic compounds may be the main sponsors to the antioxidant activity. These plants could be effective in antioxidant purposes.
Keywords: Borago officinalis, Echium amoenum, Total Phenol content, DPPH assay