

Phytochemical constituents of root and aerial parts of *Scrophularia striata*

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Background and Aims: *Scrophularia striata* Boiss is used for the treatment of eczema, wounds and has shown various biological activities such as antimicrobial, antitumoral and anti-inflammatory properties. In this study the amounts of total phenolic, flavonoid, soluble sugar and anthocyanin contents of root and aerial part of *Scrophularia striata* are compared.

Methods: Samples were extracted using ethanol %80 as a solvent. The amount of total phenolic compounds in all sample extracts was determined with the Folin-Ciocalteu's reagent according to Meda et al. (2005). Results of total phenolic contents were expressed as milligrams of gallic acid equivalents (GAE) per gram dry weight (DW). Total flavonoids compound was measured by the aluminum chloride colorimetric assay based on Chang et al. (2002). Flavonoid compound of extracts were expressed as mg quercetin equivalent/g dry weight (DW). The soluble sugars were determined spectrophotometrically by the phenol-sulfuric acid method based on Kuchert method (1985). For aerial part, total anthocyanin content was measured based on Mita et al. method (1997).

Results: Aerial part exhibited higher total phenolics (TP) and total flavonoids (TF) compared to root, 4.60 mg gallic acid equivalent (GAE)/g DW and 1.34 mg quercetin equivalent (E)/g dry weight (DW) respectively. Anthocyanins contents (ANT) in aerial part was 0.043. Total soluble sugars for aerial part and root were 36.08 and 37.24 mg glucose equivalent (GAE)/g DW respectively.

Conclusions: Results showed the potential of this plant as a source of and flavonoid phenolic compounds especially from the aerial part. So, it is proposed that this plant possess antioxidant activity.

Keywords: Anthocyanins; Flavonoids; Phenolic compounds; *Scrophularia striata*; Soluble sugars