



## Antioxidant And Antihemolytic Activities Of *Scilla maritima* Leaf Extracts

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### Abstract

There is a growing interest in finding new plant-derived antioxidants that are safer than synthetic products. These natural antioxidants are recongized for their health benefits and can be used in food, cosmetic and pharmaceutical industries. The present study reports the evaluation of antioxidant and antihemolytic activities of leaf extracts (CrEL: crude extract, EaEL: ethyl acetate fraction and AqEL: aqueous fraction) from *Scilla maritima*, a medicinal plant widely used in the treatment of many deseases. Total polyphenols and flavonoids of different extracts were determined by Folin-Ciocalteu and Aluminum chloride colorimetric assays, and ranged from 44.3 to 166.48±5.89 EAG/g and 7.27 to 10.28 µg EQ/mg, respectively. The antioxidant activity of these extracts was performed using DPPH free radical scavenging, β-carotene bleaching, reducing power and ferrous ion chelating methods. Potent DPPH scavenging activity was exhibited by EaEL and AqEL (IC<sub>50</sub> of 10.98±0.23 and 46.93±1.44µg/ml), and these fractions were either the most active in inhibition of β-carotene oxidation (89.83 and 80.88%). While, EaEL and CrEL displayed the greater reducing power (EC<sub>50</sub>= 43.4±0.58 and 55.4±0.59 µg/ml) and CrEL showed the strong chelating activity (IC<sub>50</sub>= 93.8±2.83 µg/ml). Finally, all extracts have significant potential in protecting red blood cells against free radicals. These results support the use of this species in traditional medicine and could be a potential source of natural antioxidants.

**Key Words:** *antioxidant, hemolysis, flavonoids, polyphenols, Scilla maritima*

