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HPLC-MS analysis of flavonoid, phenolic content and antioxidant properties of Paronychia argentea Lam.

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This study was carried out in order to evaluate the flavonoid profile, phenolic content and antioxidant activity of the aerial parts of Paronychia argentea Lam. (Caryophyllaceae), also known as Arabic tea. Eleven flavonoids were characterized by using high-performance liquid chromatography-electrospray ionization-mass spectrometry (HPLC-ESI-MSn) and quantified by HPLC-UV/DAD; six of them, including isorhamnetin-3-O-dihexoside, quercetin-3-O-glucoside, quercetin methyl ether-O-hexoside, quercetin, jaceosidin and isorhamnetin, were described in this plant for the first time in this study. The plant ethanol extract (used as a control) showed the highest content of phenolic compounds, followed by the decoction and infusion. The antioxidant activity of the decoction (reducing power, scavenging capacity on DPPH radical and inhibition of lipid peroxidation) was found to be higher than that of the infusion. The decoction obtained from the aerial part of P. argentea can be considered as a protective beverage against oxidative stress.

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