

Polyphenols of *Rosa* L. Leaves Extracts and their Radical Scavenging Activity

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Antioxidant potential of *Rosa* L. leaves methanolic extracts was evaluated *in vitro* using a spectrophotometric method based on measuring the radical scavenging effect on 2,2-diphenyl-1-picrylhydrazyl (DPPH) radicals. The contents of ellagic acid, quercetin and kaempferol in the extracts from leaves of seventeen rose species were determined using SPE-RP-HPLC methods. Additionally, total phenolic content was determined spectrophotometrically according to the Folin-Ciocalteu procedure and calculated as gallic acid equivalents (GAE). Remarkable high antioxidant activity and high total phenolic content ($5.7\% < \text{GAE} < 15.2\%$), large ellagic acid (EA) content from 9.37 to 19.42 mg/g of dry weight, a quercetin content ranging from 3.68 to 15.81 mg/g of dry weight and kaempferol content from 1.25 to 9.41 mg/g of dry weight were found in rose leaves. Significant correlation between EA ($r^2 = 0.6131$), quercetin ($r^2 = 0.5158$), total phenolic content ($r^2 = 0.8485$) and antioxidant activity was observed.

Basing on the studies conducted one may assume that the extracts of rose leaves are a rich source of natural antioxidants and could be used to prevent free-radical-induced deleterious effects.

Key words: *Rosa* L., Phenolic Compounds, Antioxidant Activity