Abstract

In this study, the purpose is to investigate and compare the in vitro antioxidant activities of methanol extracts of Nepeta italica, Nepeta ciliaria and Nepeta caesarea. The antioxidant capacities of 3 different species collected from different locations and extracted with methanol were assayed by 1, 1- diphenyl-2-picrylhydrazyl (DPPH) radical-scavenging activity and cupric reducing antioxidant capacity (CUPRAC) assay.

The total phenolic contents of N. italica, N. ciliaria, N. caesarea extracts measured by Folin-Ciocalteu method were 24.8, 21.4 and 17.3 μg/mg (extract) as gallic acid equivalent whereas the antioxidant activities found by CUPRAC expressed as trolox equivalent antioxidant capacity and DPPH assay expressed as IC50; 114.5±1.4, 90.4±1.05 and 80.4±0.71 μmol TR/g and 25.5 ± 0.55 33.4 ± 1.25 and 39.1± 0.76 μg/ml, respectively.

The present results showed that the extracts exhibited antioxidant properties. Especially, the extract of N. italica has higher activity than others for all assays. It may be suggested that the extracts of Nepeta species possessed middle antioxidant power when compared to other plants belonging to the Lamiaceae family.

Key words: Nepeta species, Antioxidant activity, DPPH, Folin-Ciocalteu, CUPRAC assay