
Evaluation of Free radical scavenging and total antioxidant capacity by methanolic leaf extracts of *Neolitsea sericea* (Blume) Koidz. and *Gymnema sylvestre* (Retz.) R.Br. ex Sm. (Asclepiadaceae).

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Résumé

In this present study, phytochemicals composition and antioxidant activities of methanolic leaf extracts of *Neolitsea sericea* (Blume) Koidz. (Lauraceae) and *Gymnema sylvestre* (Retz.) R.Br. ex Sm. (Asclepiadaceae) were investigated. The antioxidant property of methanolic leaves extract was evaluated using three methods, such as DPPH Radical Scavenging Assay, Total antioxidant phosphomolybdenum method and Total Reducing Capacity. The preliminary phytochemical screening of *Neolitsea sericea* revealed that the presence of alkaloids, flavonoids, phenol, saponins, steroids, tannins and terpenoids. Preliminary phytochemical screening of *Gymnema sylvestre* showed the presence of alkaloids, flavonoids, phenols and saponins. The total phenolic contents in the leaf methanolic extracts of *N. sericea* and *G. sylvestre* were found to be 34.9 ± 0.6 mg gallic acid equivalent (GAE)/g dry weight and 23.0 ± 0.3 mg GAE/ g dry weight respectively. The total flavonoid contents of *N. sericea* and *G. sylvestre* leaf extracts were 11.9 ± 0.2 and 5.4 ± 0.3 mg rutin equivalent (RE)/g of dry extract, respectively. It is found that methanolic leaf extracts of *N. sericea* and *G. sylvestre* can strongly scavenge DPPH radical with IC₅₀ values $37.3 \mu\text{g/ml}$ and $33.7 \mu\text{g/ml}$ while the positive control ascorbic acid showed the significant IC₅₀ values of $32.4 \mu\text{g/ml}$. It is concluded that the presence of polyphenolic compounds in methanolic extracts might be responsible for the high antioxidant activity. The phytochemical screening suggests that phenols and flavonoids present in these plant extracts might provide a great value of antioxidant activity. Hence, these results demonstrated that methanolic extracts of *N. sericea* and *G. sylvestre* leaves have excellent antioxidant activities and thus have great potential as a source for natural health products.

Mots-Clés: Antioxidant potential, *Neolitsea sericea*, *Gymnema sylvestre*, Phytochemical analysis, Medicinal Uses.

*Intervenant