

Determination of total phenolic content (TPC) of *Nymphaea nouchali* and *Nymphaea pubescens* by Folin Ciocalteu method

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Nymphaea nouchali (Nil Manel) and *Nymphaea pubescens* (Olu) are aquatic plants, and have a long history of use as food and folk medicine in many countries. Many phenolic compounds isolated from these two plant species have exhibited antioxidants properties and some simple phenolic compounds have shown to possess various pharmacological activities, including anti-inflammatory, anti-proliferative, antioxidant and pro-apoptotic potential. The aim of the present study was to determine the content of total phenol in an extract from *N. nouchali* and *N. pubescens* flowers collected from Galle, Sri Lanka, by a UV/Vis spectrophotometric method. Aqueous methanol (80%) was used as the solvent to extract flowers including petals, stamens and pistil and all extracts were analyzed for TPC by Folin Ciocalteu method. Results were expressed in terms of gallic acid equivalence in (GAE)/g dry weight (DW) of flower part. *N. pubescens* petals contained 49.780 ± 0.626 , stamens 37.581 ± 0.477 and pistil 31.889 ± 0.711 , while *N. nouchali* petals showed 22.536 ± 0.383 , stamens 38.702 ± 1.112 and pistil 30.119 ± 1.116 GAE⁻¹. *N. pubescens* showed higher TPC in every plant part tested compared to *N. nouchali* and petal extract of *N. pubescens* showed highest TPC. Hence, *N. pubescens* flowers are a good source of antioxidants. Results emphasized that *N. nouchali* and *N. pubescens* extracts have high phenolic content and the importance of the use of natural products to treat pathological conditions.

Keywords: Total Phenolic Content, *Nymphaea nouchali*, *Nymphaea pubescens*, Folin Ciocalteu

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