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Antioxidant potential and total phenolic content of nutmeg (*Myristica fragrans*)

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Antioxidants, especially polyphenols help protect the body against oxidative stress by neutralizing free radicals, reactive oxygen species (ROS) and reactive nitrogen species (RNS). The present study was carried out to determine the antioxidant potential and total phenolic content of methanolic extracts of the pericarp, seed and mace of nutmeg (*Myristica fragrans*) fruit. The total phenolic content was estimated using the Folin-Ciocalteu colorimetric method and expressed as gallic acid equivalents (GAE). The radical scavenging potential of the fruit components was estimated using a stable radical, 1,1-diphenyl-2-picrylhydrazyl (DPPH). The highest phenolic content was found in nutmeg seed extracts (50 ± 0.3 GAE/g) followed by mace (44 ± 0.1 GAE/g). When the fruit extracts were subject to DPPH radical scavenging assay, nutmeg seed extract exhibited highest free radical scavenging capacity (92 ± 0.5%) while pericarp recorded the lowest (11 ± 0.4%). Both phenolic content and antioxidant potential are highest in nutmeg seed. It can be observed that the phenolic content in the extracts correlates well with the radical scavenging activity (R^2=0.90), confirming that phenolic compounds contribute to the radical scavenging activity of these plant extracts.

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