

Antioxidant Activity and Total Phenolic Content of Different Skin Coloured Brinjal (*Solanum Melongena*)

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ABSTRACT: The aim of this study was to determine the antioxidant activity and the total phenolic content (TPC) of *Solanum melongena* of different skin colours/patterns: purple with no lines (S1), light purple with lines (S2), dark purple with lines (S3), pink coloured (S4) and purple with green lines (S5). The antioxidant activity was evaluated using different analytical techniques: DPPH and ABTS free radical scavenging assays, ferric reducing antioxidant power (FRAP) assay and ferric thiocyanate (FTC) test. The results showed that there was a significant difference ($P < 0.0001$) between the skin colour/pattern and antioxidant activity. Total phenolic content (TPC) and FRAP values of brinjal extracts varied from 48.67 ± 0.27 to 61.11 ± 0.26 mg GAE/100 g fresh weight and 4.19 ± 0.11 to 7.46 ± 0.26 mmol of FeSO₄/g fresh weight, respectively. Brinjal with dark purple lines (S3) showed the highest antioxidant activity as quantified by FRAP and TPC while brinjal with light purple lines (S2) showed the least. Purple brinjal with no lines (S1) displayed the highest DPPH radical scavenging activity with an IC₅₀ value of 3.51 ± 0.62 mg/ml while S3 demonstrated the strongest total antioxidant activity as measured by ABTS assay with an inhibition of 40.45%. In the FTC assay, the percent inhibition of linoleic acid oxidation ranged from 15.11 ± 1.31 to 26.74 ± 2.85 .

Keywords: Antioxidant activity, lipid peroxidation, phenolic content, skin colour, *Solanum melongena*

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