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Comparison of Antiglycation and Antioxidant Potentials and Total Phenolic Contents of Decoctions from Antidiabetic Plants

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Abstract

Non enzymatic protein glycation and oxidative stress are the key molecular basis of the macro and micro vascular complications observed in chronic diabetics. Decoctions prepared with medicinal plants with antiglycation and antioxidant potentials therefore have therapeutic potential in preventing diabetic complications. Decoctions of five antidiabetic plants (parts) namely, *Cassia auriculata* flowers, *Osbeckia octandra* leaves, *Syzygium cumini* bark, *Phyllanthus emblica* fruits and *Scoparia dulcis* whole plant were analyzed for their DPPH and ABTS antioxidant potentials, antiglycation potentials and total phenolic contents. Decoctions of *S. cumini*, *O. octandra* and *P. emblica* had significantly high ($p < 0.05$) antiglycation potential ranges of 16.8–35.2, 23.0–28.5 and 37.4–82.3 µg/ml with correspondingly high antioxidant potentials and total phenolic contents of 851, 658 and 625 mg GAE/g respectively.

Keywords: decoction; medicinal plants; antiglycation acticity; antioxidant potential