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Antioxidant, Antiglycation Potentials and Total Phenolic Content of *Scoparia dulcis* Decoction

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Long term diabetes increases the risk of many micro and macro vascular diabetic complications and oxidative stress, due to formation of excessive amounts of free radicals. Non enzymatic protein glycation is the key molecular basis of the above complications observed in diabetic individuals. The current tendency to use herbal treatments in Diabetes mellitus is mainly due to the therapeutic efficacy, safety, low cost and minimal adverse effects. Among the many herbs used, the decoction prepared using the whole plant of *Scoparia dulcis* is a frequently used traditional medicine in the treatment of Diabetes mellitus.

Since no data are available on the antiglycation potential of the decoction of *S.dulcis* plant this study focused on determining the antiglycation potential, DPPH and ABTS antioxidant potentials and total phenolic content of the *S.dulcis* decoctions.

The commercially available dried *S. dulcis* and three other fresh samples collected were used for the study. The DPPH and ABTS antioxidant potentials of the samples were in the range of 450-540 µg/ml and 549–615 TEAC mmol/g respectively. Antiglycation potentials of the four samples were in the range of 131-230 µg/ml and total phenolic contents were 160–186 mg/GAE/g. The results of the study prove the effectiveness of the use of *S. dulcis* plant for treating Diabetes mellitus in traditional medicine.

Key words: antiglycation, antioxidant, decoction, *S.dulcis*, traditional medicine

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