

Antioxidant Activity in Aqueous Extracts of *Mathumeha Chooranam* Stored for Six Months at Room Temperature and at 4°C

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Free radicals are involved in many disorders like neurodegenerative diseases, cancer, aids and diabetes mellitus. Oxidative stress in cells and tissues results from the increased generation of reactive oxygen species and / or from decreases in antioxidant defense potential. *Mathumeha chooranam* (MC) is widely used in North and Eastern province of Sri Lanka Siddha Hospitals and Dispensaries for Diabetic mellitus. It is prepared from the leaves of *Gymnema sylvester*, Skin of the seeds of *Terminalia chebula*, Fruit of *Phyllanthus embelica*, and leaves of *Murraya keonigii*. The objective of this study was to estimate the antioxidant activity of aqueous extracts of MC at different storage conditions. Total antioxidant capacity (TAC) was estimated in the cold and hot aqueous extracts of the MC stored at room temperature and at 4°C in monthly interval for six month and assessed by using Spectrophotometer. The initial TAC of cold and hot water extracts were (2424.8±44.5) and (2867.3±13.1) µmol/g dry weight respectively. When the MC was stored at room temperature for a month and the TAC was analysed, the cold and hot water extracts contained (2280±47.2), (2317±34.7) µmol/g dry weight respectively. Extraction of antioxidant activity of MC was better with hot water than with cold water. TAC of MC decreased when stored both at room temperature and at 4°C. Both cold as well as hot extracts exhibited antioxidant activity even after storing for 6 months. At 3 months the decline in TAC of the powder stored at 4°C is higher than that stored room temperature.

Keywords: Diabetic mellitus, ferric reducing activity, *Mathumeha chooranam*, Siddha medicine, total antioxidant capacity

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