

# Antioxidant Activity of Ingredients of Mathumeha Chooranam, A Drug Used for the Treatment of Diabetes Mellitus in Siddha System of Medicine

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## ABSTRACT

In the Siddha system of Medicine there are several chooranams are used to cure the Mathumeham (Diabetes mellitus). Among the chooranams, different varieties of Mathumeha chooranam are used in Siddha system. Mathumeha chooranam contains *Terminalia chebula*, *Phyllanthus embelica*, *Murrya keonigii*, and *Gymnema sylvestrae*. This chooranam is widely used in Siddha Hospitals and Dispensaries of North and Eastern Province of Sri Lanka. The Objective of this study was to determine antioxidant level of the ingredients of the Mathumeha chooranam. Two different Hot and cold extracts were obtained from this ingredients of skin of the seeds of *Terminalia chebula*, Unripe fruit of *Phyllanthus embelica* leaves of *Murrya keonigii*, and *Gymnema sylvestrae*. They were assessed for their antioxidant activity by measuring Total Phenolic Content. Among the ingredients of the mathumeha chooranam studied, *Terminalia chebula* showed significant content of phenolics (TPC) in mg TAE/g of dry weight in cold as well as in hot extracts at Room temperature ( 383.9±70.2, 336.9±23.5) followed by *Phyllanthus embelica* (184.2±22.01, 172.8±16.06), *Gymnema sylvestrae* (9.0±0.27, 9.8±0.42) and *Murrya keonigii*. There was no significant difference in the mean TPC between room temperature and refrigerator. When compared with the cold extracts of ingredients of mathumeha chooranam with hot extracts, hot extracts contained higher antioxidant content. The cold and hot aqueous extracts of the dried powder of the ingredients of the mathumeha chooranam possess antioxidant activity. Among the four ingredients, *Terminalia chebula* was found to possess significantly higher antioxidant activity than the others. Next to the *Terminalia chebula*, *Phyllanthus embelica* had higher content of the antioxidant.

**Key words;** - antioxidant activity, Mathumeha chooranam, Total Phenolic content, Siddha Medicine, Diabetes mellitus, Mathumeham