

Total phenolic content in aqueous extracts of *Terminalia chebula* stored in different temperature

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ABSTRACT

In Siddha system of Medicine Skin of the seeds of the *Terminalia chebula* is mostly used in preparation of Siddha drugs. Many of these medicinal plants are excellent sources of phytochemicals, which have potent antioxidant activities. The objective of this study was to determine the Total Phenolic Content (TPC) in aqueous extracts of the powder of the skin of the seeds of *T.chebula* at different period of storage. Plants parts were dried to constant weight, powdered and sieved.. TPC was estimated using Folin Ciocalteu's reagent. In. Cold and hot aqueous extracts of fresh. *T. chebula* was assessed for total phenolic content by monthly interval. At first day *T.chebula* powder stored at room temperature contained 359.1 and 365.6($\mu\text{g TAE/g}$ dry weight), TPC in cold water and hot water extracts respectively. After six months of storage at room temperature, the powder contained TPC 318.7 and 320.5 $\mu\text{g TAE/g}$ dry weights in cold and hot water extracts. TPC in cold water extract of *T.chebula* indicated a decrease by 0.2%, 3.06%, 4.09%, 10.2%, and 11.25% respectively. And in hot water extract by 0.79%, 2.27%, 5.4%, 8.59%, and 12.35% respectively at room temperature. TPC ($\mu\text{g TAE /g}$ dry weight) in cold water extract prepared from the powder stored at freezer, the TPC in ($\mu\text{g TAE/g}$ dry weight,) (359) and in hot water extract (362) on 2nd month. TPC in cold water extract decrease by 0.02%, 1.67%, 2.87%, 10.08% and 10.75% respectively. And in hot extract by 0.98%, 1.37%, 3.8%, 7.05%, and 11.16% respectively. TPC of powder decreased when stored at either room temperature or in freezer (4°C),. Hence freshly prepared plant parts are recommended for the preparation of "chooranams"

Keywords: Antioxidant activity, Chooranam Siddha medicine *Terminalia chebula*, Total Phenolic Content

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