

Estimation of Flavonoid Content of Plant *Datura Metel*

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Flavonoids are a class of plant secondary metabolites. Flavonoids were referred to as Vitamin P from the mid-1930s to early 50s, but the term has since fallen out of use. Since *D. metel* is a rejuvenating herb this study was planned to estimate the flavonoid content in *D. metel* because flavonoids also determine the antioxidant capacity of the plant. The plant was obtained from Government herbal garden, Navakkiri, Puththur, Jaffna and taxonomically authenticated. The collected plants were washed thoroughly in running tap water and it was separated into leaf, flower, stem, and root immediately. Then they were dried in sun shade and were powdered. Then powders were stored in air tight dry labeled plastic containers. Cold and hot water extract were prepared from the powders.

The concentration of flavonoids in various plant part extracts of the *D. metel* was determined by aluminum chloride method using spectrophotometry and the flavonoid content expressed as mg of tannic acid equivalent/ gm of DW. The assay was performed in duplicates and data presented as mean \pm SD. One percent tannic acid used as standard. The concentration of flavonoids in cold and hot water extracts of different parts ranged from 358 ± 23.38 to 495.68 ± 43.63 $\mu\text{mol/g DW}$ and from 444.70 ± 43.63 to 562.50 ± 71.97 $\mu\text{mol/g DW}$ respectively. Both cold and hot water extracts of flower had the highest flavonoid concentration 495.68 ± 75.73 , 562.5 ± 71.97 $\mu\text{mol/g DW}$ respectively. The lowest flavonoid concentration was found in the root. According to the study both cold and hot water extract of flower were showed highest amount of flavonoid content.

Key words: Flavonoid, *D. metel*, Aluminum chloride, Tannic acid, Spectrophotometry

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