

## **OP 22 - Evaluation of Phenolic Profile and in vitro Antioxidant Activity of Fruit Extract Obtained from Madan (*Syzygium cumini*) Grown in Sri Lanka**

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**Background:** Natural antioxidants present in herbs, fruits and vegetables can bring substantial health benefits as dietary nutrition supplements and therapeutic agents.

**Objectives:** The aim of the present study was to evaluate phenolic profile and in vitro antioxidant activity of *syzygium cumini* (madan) fruit grown in Sri Lanka.

**Methodology:** Two different solvents namely, acidified 80 % aqueous methanol and acidified 70 % aqueous acetone were used to obtain the crude extracts from the fruit. Preliminary phytochemical screening of crude extracts was performed. Total phenol, total flavonoid contents and antioxidant activity were investigated using Folin-Ciocalteau method, aluminium chloride colorimetric method and 2-2-diphenyl-1-picrylhydrazyl (DPPH) assay respectively.

**Results and conclusions:** Preliminary phytochemical screening revealed the presence of carbohydrates, reducing sugars, flavonoids, phenolics and anthocyanins in each crude extract while alkaloids and saponins were absent. Total phenolic contents were determined as  $1433.984 \pm 35.649$  and  $1247.214 \pm 65.979$  mg Gallic acid equivalent (GAE)/100 g dry weight of edible fruit for acidified 80 % aqueous methanol and for acidified 70 % aqueous acetone respectively. Total flavonoid contents were  $417.184 \pm 16.687$  and  $355.722 \pm 21.928$  mgCatechin equivalent (CAE)/100 g dry weight of edible fruit for acidified 80 % aqueous methanol and for acidified 70 % aqueous acetone respectively. The promising antioxidant activity ( $2.326 \pm 0.130$  mmolTrolox / 100 g dry weight of edible fruit) was exhibited by the acidified 80 % aqueous methanol extract for DPPH assay followed by acidified 70 % acetone extract ( $2.047 \pm 0.110$  mmolTrolox / 100 g dry weight of edible fruit). The results of this study concluded that *S. cumini* fruit is a good source of antioxidants and further studies are needed for any other potential benefits, separation and isolation of individual antioxidant compounds.

**Keywords:** Antioxidant activity, *Syzygium cumini*, total flavonoid content, total phenol content