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Variation of phytochemicals, antioxidant capacity of different parts of *Ocimum tenuiflorum* L. (Lamiaceae) grown in two agro climatic regions in Sri Lanka

R M Dharmadasa,[1*] K W Abeywardhana,[2] D C Abeysinghe[2] and A M L Attanayake[1]

[1]*Industrial Technology Institute, 363, Baudhaloka Mawatha, Colombo 07*
[2]*Department of Plantation Management, Faculty of Agriculture and Plantation Management, Wayamba University of Sri Lanka, Makandura, Gonawila*

Ocimum tenuiflorum L. (Lamiaceae) is a therapeutically important widely used medicinal plant in traditional systems of medicine for religious purposes and spiritual sanctity in many Asian countries. The present study compares the total phenolic content (TPC), total flavonoid content (TFC) and total antioxidant capacity (TAC) of leaf, bark, flower and seeds of *Ocimum tenuiflorum* harvested at three consecutive pruning stages grown in two agro climatic regions. TAC, TFC and TPC were determined using standard protocols. Total antioxidant capacity of leaf, bark, flower and seed extracts significantly ($p=0.05$) increased from first pruning to third pruning irrespective of agro climatic regions. Antioxidant potential and total flavonoid content of different parts of *O. tenuiflorum* cultivated in the low country intermediate-zone (IL_{1a}) and low country dry zone (DL_{1b}) varied as leaf> bark> flower> seeds. Even though the TPC significantly varied among different parts as well as prunin g stages, a relationship was not observed either for the agro climatic region or pruning intervals. The results of the present study are of vital importance for the determination of suitable agro climatic region, optimum harvesting stage for higher phytochemicals, bioactivity and optimum therapeutic properties of *O. tenuiflorum*.

Keywords: *Ocimum tenuiflorum*, Lamiaceae, total antioxidant capacity, total phenolic content, total flavonoid content

dharma@iti.lk Tel: +94 718573260