

Antioxidant and Total Phenol Contents of Selected Leafy Vegetables Consumed in Jaffna Peninsula

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ABSTRACT

The aim of the study was to determine the antioxidant content and total phenol content of leafy vegetables such as 'Vallarai' (*Centella asiatica*), Leeks (*Allium ampeloprasum*), 'Mulai keera' (*Amaranthus*),

'Ponnankani' (*Illecebrum sessile*), 'Ilai kova' (*Brassica oleracea*), Moringa (*Moringa olifera*), 'Kurincha' (*Gymnema sylvestre*), 'Thavaci murungai' (*Justica tranquebarensis*), 'Akaththi' (*Sesbania grandiflora*) and Curry leaf (*Murraya koenigii*) available in Jaffna. Total phenolics were measured using the Folin Cio-calteu reagent with gallic acid as standard. The antioxidant contents of leafy vegetables were assayed by both phosphomolybdenum assay and reducing power assay with standards of ascorbic acid and butylated hydroxyl toluene respectively. Based on the phosphomolybdenum assay, highest antioxidant content was observed in leeks [261.51(±0.54) mg/100 g dry samples and the lowest value in 'Ponnankani' [49.69 (±0.96) mg/100 g dry samples. Based on the reducing power assay, highest antioxidant content was found in 'Vallarai' (108.244 (±0.78) mg/100g dry sample], and lowest antioxidant content was detected in 'Kurincha' [35.76 (±0.28) mg/100g dry sample]. Highest total phenol content was found in 'Kurincha' [401.88 (±0.16) mg/100 g dry samples and lowest total phenol content was detected in Leeks [53.94 (±0.46) mg/100g Dry Weight] mg/100g dry sample]. From this study, highest antioxidant content and total phenol contents were found in 'Kurincha' while lowest amounts were found in 'Ponnankani'. The present study shows that leafy vegetables contain a lot of antioxidants and total phenols to support human health.

Key words- Antioxidant, Ascorbic acid, Butylated hydroxyl toluene, Gallic acid, Total phenol