

Composition analysis of selected leafy vegetables grown in Sri Lanka

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The composition of selected leafy vegetables, namely *Trianthema portulacastrum*, *Costus speciosus*, *Coccinia grandis*, *Centella asiatica*, *Amaranthus viridis*, *Alternanthera sessilis*, *Dregea volubilis* and *Sesbania grandiflora* grown in Sri Lanka was studied. Samples of each vegetable species were collected from different geographical locations of the country representing agro-climatic regions. Healthy and undamaged leaves were collected, cleaned and air dried at 45 °C and stored at 4 °C for further analysis. The proximate composition of each sample was determined and presented on fresh weight basis. Moisture, ash, crude fat, crude protein and total carbohydrate contents were analyzed using AOAC standard methods of air oven, direct gravimetric, soxhlet, kjeldahl and phenol sulfuric methods, respectively. Moisture content ranged from 76.9% to 89.5%. The highest crude protein content was observed in *S. grandiflora* (7.17±0.03%) while the lowest was found in *C. speciosus* (1.73±0.01%). Crude fat content ranged from 0.33% to 1.81±0.08%. The ash content varied from 1.28±0.33% to 3.15±0.02%. *A. sessilis* (10.76±0.11%) was comprised of the highest total carbohydrate content followed in decreased order by *D. volubilis* (10.23±0.41%), *S. grandiflora* (9.81±0.08%), *C. asiatica* (7.02±0.04%), *A. viridis* (6.46±0.08%), *C. speciosus* (5.46±0.07%), *C. grandis* (5.05±0.04%) and *T. portulacastrum* (4.41±0.11%). The results of this study indicated that *S. grandiflora*, *D. volubilis* and *A. sessilis* contained higher protein, fat and carbohydrate contents than other leafy vegetable species and *T. portulacastrum*, and *A. sessilis* contained higher ash contents than others.

Keywords: proximate composition, ash, total carbohydrate, crude fat, crude protein