Abstract No: 182 ***Life Sciences***

NUTRIENT ANALYSIS OF CULTIVARS OF *CUCURBITA* SPP. (PUMPKIN) GROWN IN THE DRY ZONE OF SRI LANKA

K.O.G.H. Ruwanthika[1*], M.L.A.M.S. Munasinghe[1] and R.A.U.J. Marapana[2]

[1]Department of Botany, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[2]Department of Food Science and Technology, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[*]hgamage1010@gmail.com

Different *Cucurbita* spp. generally recognized as pumpkin, is a commonly grown vegetable in dry and intermediate zones of Sri Lanka. *C. maxima* and *C. moschata* are popular cucurbits that include different types of open-pollinated, hybrid and imported varieties. This study aimed to conduct a nutrient analysis of seven pumpkin cultivars collected from Kudaoya in the Monaragala District to identify the differences in the nutrient composition among the selected cultivars. The study area comes under the dry zone low country 1b (DL1b) agro-ecological region. *Rajah, Leela, Malbaro, Batana, Bingha, Katana* and *Meemini* were the selected pumpkin cultivars, and out of these, *Rajah, Leela* and *Katana* were recognized as *C. maxima* varieties. In contrast, *Bingha, Meemini, Batana* and *Malbaro* were recognized as *C. moschata* varieties. All the selected cultivars were collected within a range of 5 km from the Kudaoya town and at their fullest harvestable maturity in the *Maha* season. The collected samples were stored under ambient temperature, and the flesh part of each cultivar was powdered before the nutrient analysis. In the nutrient analysis, the proximate composition, Fe, Mg and K compositions and the anti-oxidant (AO) activity in different pumpkin cultivars were evaluated using standard analytical methods (Protein-Bradford assay, Carbohydrate-Phenol sulphuric method, Lipid content-Bligh and Dyer method, Crude fibre-Weende method, Moisture level-Rapid moisture analyser, Minerals-Atomic absorption spectroscopy method, AO activity-Ferric reducing anti-oxidant power assay). The nutrient compositions among the cultivars were statistically compared through one-way ANOVA. In 100 g of powdered pumpkin flesh, the nutrient composition was reported as protein content in the range of 32.8-32.9 g, carbohydrate 57.8-57.9 g, lipid content 1.04-6.13 g, crude fibre 2.19-10.94 g, moisture level 8.24%-10.95%, Fe content 4.11-7.76 mg, K content 5,055-8,841 mg, Mg content 96.0-337.02 mg and AO activity 145.1-147.1 mg AAE (Ascorbic acid equivalent) in dry-weight basis. The three varieties of *C. maxima* have recorded significantly higher nutrient levels ($p<0.05$) than the *C. moschata* varieties. The overall nutrient composition was significantly higher in the cultivar type '*Rajah*', an imported hybrid variety, compared to the other cultivars analysed in the study.

Financial assistance from the Department of Botany of the University of Sri Jayewardenepura is acknowledged.

Keywords: *Cucurbita* spp., Low country dry zone, Nutrient analysis, Pumpkin cultivars, Sri Lanka