Determination of proximate and mineral composition of *Ulva reticulata, Caulerpa racemosa* and *Sargassum Wightii* in Southern Coast of Sri Lanka

T.P. Hemachandra[1]*, W.J.C.M. Jayewardena[2], Thiruchenduran Somasundaram[1], G.J. Ganegama Arachchi[1] and R.P.N.P. Rajapakse[2]

[1]*National Aquatic Resources Research and Development Agency (NARA), Crow Island, Colombo 15, Sri Lanka*

[2]*Department of Food Science & Technology, Faculty of Agriculture, University of Peradeniya, Sri Lanka*

There has been little application of seaweeds in Sri Lanka contrary to the countries like Japan, China and some Western countries. Climate, habitat, maturity and environmental conditions may cause differences in nutrient composition of seaweeds. In this backdrop three seaweeds *(Ulva reticulata, Caulerpa racemosa* and *Sargassum wightti)* were collected from Koggala and Dondra and investigated for nutritional composition. The fresh seaweed samples were cleaned, dried (50°C, 48 hrs) and ground into fine powder and analyzed for proximate composition viz moisture, total ash, protein, fat, crude fibre, macro minerals (Na, K, Ca, Mg) and micro minerals (Fe, Cu, Zn, Se). The results revealed that moisture, total ash, protein, fat and crude fibre contents of *U. reticulata* were 12.98±0.18%, 20.35±0.61%, 28.63±0.63%, 0.91±0.04% and 7.19±0.32% respectively. *C. racemosa* contained the moisture, total ash, protein, fat and crude fibre in amounts of 10.88±0.49%, 26.09±0.63%, 25.84±0.49%, 1.31±0.03% and 15.36±1.00% respectively. In *S. wightii* the moisture, total ash, protein, fat and crude fibre the contents were as 12.73±0.21%, 15.36±0.71%, 14.40±0.51%, 0.46±0.05%, 12.06±0.23% respectively. Concentration of minerals of all three species increased in the order: Se< Zn< Fe< Cu< Mg< Na< K<Ca. Macro mineral level and micro mineral level in *U. reticulata* were found in the range of 14.156 - 147.733 ppm and 0.006 – 0.059 ppm respectively. *C. racemosa* contained macro elements in the range of 6.451 – 95.490 ppm level and micro elements in the range of 0.006 – 0.037 ppm. *S. wightti* showed the 12.716 – 48.229 ppm level of macro minerals and 0.004 – 0.017 ppm of micro mineral level. Among these 3 species, the highest mineral content 147.733±0.895 ppm was resulted in *U. reticulate* for Ca which is more or less two times as much Ca in *C. racemosa.* The results of this study revealed that the Chlorophyta species *U. reticulata* and *C. racemosa* good source of calcium,protein and crude fiber and could be used as good source of supplements for conventional leafy greens.

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**Corresponding author - email: thushinihemachandre@gmail.com*