

**PHYSICOCHEMICAL AND NUTRITIONAL PROPERTIES OF TENDER COCONUT  
(*Cocos nucifera*) WATER OBTAINED FROM DIFFERENT COCONUT VARIETIES**

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The liquid endosperm of tender coconut (*Cocos nucifera*) makes a refreshing drink during summer. It is also prescribed for cases of diarrhoea and vomiting against dehydration of the body. Global use and demand for tender coconut water have increased due to its nutritional and medicinal benefits. The nutritional composition and phytochemical profiles of young coconut water are influenced by variety, location, and environmental factors. This study aimed to compare the physicochemical and nutritional properties of tender coconut water (5-7 months mature) obtained from eight varieties of *Cocos nucifera* cultivated in Jaffna, Sri Lanka. Six local varieties viz., *Ran thambili*, *Nawasi*, Green dwarf, Yellow dwarf, Brown dwarf, King coconut, and two hybrid varieties (CRIC 60 and CRIC 65), were tested. Nutritional and physicochemical parameters of the tender coconut water of eight palm varieties were analyzed in triplicates (3 from each palm) using standard assay methods. Based on the study, significantly higher levels of total soluble solids ( $5.0 \pm 0.6$  °Brix) and total protein ( $0.59 \pm 0.15$  mg BSA/ml) were found in the King Coconut (Aurantiaca variety). Total sugar content was significantly higher in the King Coconut ( $63.575 \pm 0.28$  mg/ml) and CRIC 65 ( $64.47 \pm 2.4$  mg/ml) than the other varieties tested. *Nawasi* ( $43.9 \pm 2.42$  mg/ml), *Ran thambili* ( $43.8 \pm 3.6$  mg/ml), Green dwarf ( $44.22 \pm 1.47$  mg/ml), and Yellow dwarf ( $43.38 \pm 3.01$  mg/ml) showed significantly higher levels of reducing sugar than other varieties. Total phenolic content was significantly higher in the King Coconut ( $26.25 \pm 1.9$  µg GAE/ml) and *Ran thambili* ( $28.12 \pm 2.12$  µg GAE/ml) than the others. Total antioxidant capacity was significantly higher in the King Coconut ( $403.73 \pm 13.42$  mg GAE/ml), *Ran thambili* ( $410.21 \pm 15.3$  mg GAE/ml), and Green dwarf ( $420.99 \pm 9.6$  mg GAE/ml) than the other varieties tested. High transmittance percentage (98.8%) and less turbidity were found in *Nawasi* (typical variety) and Green dwarf. These biochemical characteristics of various popular Sri Lankan coconut varieties could be considered when choosing them for commercial products.

**Keywords:** *Cocos nucifera*, Nutritional properties, Physicochemical, Tender coconut water