



## NUTRITIONAL AND PHYSICO -CHEMICAL PROPERTIES OF COCONUT (*Cocos nucifera* L.) JAGGERY AND VALUE ADDED COCONUT JAGGERY

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### Abstract

Coconut (*Cocos nucifera* L.) saps traditionally collected Hal bark (*Vateria copallifera*) (HAL Jaggery) and pure sap collected by novel sap collection method (NSC Jaggery) were used to produce pure solid jaggery and value added solid jaggery. Three concentration of cinnamon (0.2 %, 0.4 %, 0.6 %) and nutmeg (0.05 %, 0.1 %, 1.5 %) were used to prepare cinnamon (CIN Jaggery) and nutmeg (NUT Jaggery) flavoured jaggery. Significant taste attribute was ranked by NSC Jaggery when it compared with HAL Jaggery. Only texture of jaggery has changed significantly within the cinnamon percentages and 0.2 % cinnamon was selected as best level. The addition of more than 0.05 % of nutmeg has created a significant effect on taste, texture and overall acceptability. The physico-chemical and nutritional composition of selected jaggery of 0.2 % cinnamon added jaggery and 0.05% of nutmeg added jaggery were compared with HAL Jaggery and NSC jaggery. The yield (16 %) and hardness (1184 g) of four types of coconut jaggery were not changed significantly. The pH ( 5.49±0.02 ) and browning index (50.74) of CIN Jaggery was significantly (P<0.05) higher than NSC Jaggery. Significantly (P<0.05) higher moisture content (8.92±0.22%) was resulted in NSC Jaggery. Addition of 0.2% of cinnamon into the pure coconut sap has increased the fiber content of jaggery significantly (P<0.05) from 0.05% to 0.54%. The total sugar content of HAL Jaggery and NSC Jaggery were significantly (P<0.05) high (82.20%) . Significant (P<0.05) amount of phenolic constituents were incorporated from hal bark (560.50mg GAE/100g) followed by cinnamon (232.6 GAE/100g). Therefore, the sap collection through traditional concept with Hal bark and value addition of jaggery with cinnamon have increased the nutritional benefits of coconut jaggery than NUT Jaggery and NCS Jaggery.

**Keywords:** Coconut jaggery, sap collection, value added jaggery, *Vateria copallifera*