

Coconut (*Cocos nucifera* L.) sap as a potential source of sugar: Antioxidant and nutritional properties

ABSTRACT

This study was carried out to compare the antioxidant and nutritional properties of coconut (*Cocos nucifera* L.) sap with other natural sources of sugar such as sugar palm (*Borassus flabellifer*) and sugarcane (*Saccharum officinarum* L.). Coconut sap and juice from sugar palm and sugarcane were analyzed for proximate composition, pH and total soluble solid (TSS), color, sugar profile, vitamin profile, antioxidant properties (total phenolic contents, DPPH, FRAP, and ABTS), and mineral content. The results indicated that coconut sap possesses high DPPH (23.42%), FRAP (2.09 mM/ml), and ABTS (21.85%) compared with the juices. Coconut sap also had high vitamin C (116.19 µg/ml) and ash (0.27%) contents, especially in potassium (960.87 mg/L) and sodium (183.21 mg/L) which also indicating high content of minerals. These properties showed that coconut sap could be served as a potential healthier sugar source compared with sugar palm and sugarcane juices.

Keyword: Antioxidant properties; Coconut sap; Mineral content; Proximate composition; Sugar palm juice; Sugar profile; Sugarcane juice; Vitamin profile