
Preliminary Study on Phytochemical, Proximate and Physicochemical Parameters of the Yellow Variety of Cashew Apple (*Anacardium occidentale*) Grown in Giradurukotte Region, Sri Lanka

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Cashew apple is the seasonal, accessory fruit of *Anacardium occidentale*. Although kernel has a tremendous local and international market value, cashew apples get wasted in bulk due to high perishability, astringency, limited shelf life and lack of post-harvest management techniques. Availability of such naturally ripen, nutritious fruits are scarce in the market and introducing value added products from cashew apple is important to manage consumer requirements in a healthy manner. Aim of this study is to conduct phytochemical, proximate and physicochemical analyses of cashew apple in order to explore the possibility for value addition. Phytochemical analysis was carried out using standard protocols and it showed the presence of main phytochemicals such as alkaloids, saponins, terpenoids, quinones and glycosides. Total flavonoid, phenolic and tannin were quantified based on colorimetric method using quercetin, gallic acid and tannic acid as the standards respectively and the results were recorded as 88.1 ± 0.6 mg QE/g of total flavonoids, 161.4 ± 1.3 mg GAE/g of phenolic and 143.1 ± 1.2 mg TAE/g of tannin. Proximate analysis was carried out by following AOAC protocols and it showed the moisture (78.75), ash (4.14), crude fat (8.11), fiber (5.64), carbohydrate (2.03) and crude protein (1.33) content in w/w 100% respectively. Fresh juice prepared from fruit pulp showed pH as 4.13 ± 0.01 , titratable acidity as $0.31 \pm 0.01\%$, TSS as $40.0 \pm 0.5^\circ$ Brix, density as 1.0133 g/mL, viscosity as 4.27 mPa, total sugars as 2.32 ± 0.31 g / 100 mL and ascorbic acid as 181.4 ± 0.7 mg / 100 mL. As a conclusion, cashew apple is rich in important phytochemicals, acceptable proximate compositions and favorable physicochemical properties that are responsible for its nutritional profile showing great potential for value addition in order to make it available throughout the year.

Key words: Cashew apple, Phytochemicals, Proximate, Physicochemical composition