Production of Cashew Apple (*Anacardium occidentale* L.) Flour and Determination of its Physicochemical, Functional and Nutritional Properties

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Cashew is an important cash crop in Sri Lanka which is being cultivated, especially in the dry zone of the country. Although cashew nuts have a high demand in both local and export markets, cashew apple is a highly underutilized fruit due to its extreme perishability and lack of awareness of processing technologies. This study aimed to develop an appropriate method to produce cashew apple flour and to determine the physical and functional properties of the flours resulting from different methods. The cashew variety WUCC–05 was used, and three methods were applied for the flour preparation, namely, oven drying of raw cashew apple (Method 1), boiling followed by oven drying (Method 2) and hydro blanching followed by oven drying (Method 3). Then, flour density, water absorption capacity (WAC), oil absorption capacity (OAC), swelling power (SP), water solubility index (WSI), flour colour, pH and proximate compositions were analysed. Method 2 was the best method for cashew apple flour preparation, as it resulted in desirable physical and functional properties, such as high bulk density (0.67), high WAC (274.60%), and high SP (8.95 g). Moreover, the proximate composition of the flour resulting from Method 2 revealed its ash (2.24%), crude fiber (4.54%), carbohydrate (72.12%), crude fat (4.31%) and crude protein (9.08%) contents. The moisture contents of the flours resulting from the three methods were within the acceptable limits (<10%). Collectively this study revealed that cashew apple flour has potential applications in bakery industry and can be promoted for value-added product development due to its desirable qualities.

Keywords: *Anacardium occidentale,* Cashew apple flour, Physical properties, Proximate composition