Evaluation of Proximate Composition and Mineral Content of Raw and Processed *Artocarpus nobilis* (Ceylon Breadfruit) Seeds

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Nut and seeds are recommended for a healthy diet as being recognized as a source of high-quality protein, lipids with bioactive compounds. Although many indigenous species of edible nuts could address food insecurity in developing countries, there are not enough researches to explore its possibilities of using them to improve the nutritional status of people. *Artocarpus nobilis* Thwaites (Ceylon breadfruit, Wal del/ Bedi del) is a native underutilized tree nut in Sri Lanka that is yet to be explored for its nutritional and functional properties. This study investigated the proximate composition and mineral content of raw and processed (roasted, microwaved, and boiled) *A. nobilis* seeds. Mature seeds of *A. nobilis* were collected from eight locations. Moisture, lipid, crude protein, ash, dietary fiber, and carbohydrate contents were analyzed according to the AOAC (2000) methods. The mineral content was evaluated using Inductive coupled plasma-optical emission (iCPA 7000 series, Thermo Scientific). The proximate composition of the raw *A. nobilis* seeds was as follows: 12.92±1.08% moisture (fresh weight), 11.73±0.25% crude protein, 26.45±0.86% lipids, 2.33±0.01% ash, and 30.08±0.28% dietary fiber on dry matter basis. The available carbohydrate content of raw seed was around 29.41% and raw seed provided 16842kJ of energy per kilogram of dry matter. Further, these seeds were rich in healthy minerals such as potassium (5398.31±338.39 µg/g) and magnesium (1120.69±58.39 µg/g), along with a lower level of sodium. Iron (21.58±1.99 µg/g) was the predominantly found microelement in raw seeds followed by zinc (16.77±1.82 µg/g). Processing method modulated the proximate composition in studied samples. According to the data, pan roasting and microwaving significantly increased the lipid and protein content of the raw *A. nobilis* seed. A higher energy value was observed in the processed samples than in the raw state. However, processing did not modulate the mineral composition in studied samples. The current study concluded that *A. nobilis* seeds are a good source of macro and micronutrients and both pan roasting and microwaving are preferable processing methods to improve their nutritional value.

***Keywords*:** *Artocarpus nobilis*; Processing method; Underutilized, Nuts, Nutrients