

## **Production of Green Banana Powder from *Ambul* and *Puwalu* Varieties and Comparisons of their Physicochemical, Antioxidant Properties and Shelf-life Evaluation**

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Banana is the major fruit available in Sri Lanka subjected to undergo a higher level of postharvest losses due to its perishable nature. This can be overcome by harvesting it in the immature stage and converting it into green banana powder. The green banana powder can be used to replace wheat or rice flour. Thus, the study was to produce green banana powder from two banana varieties, namely *Ambul* and *Puwalu* from Kilinochchi district, Sri Lanka, and evaluate their quality characters. Initially, fresh green banana slices of both varieties were undergone hot water blanching and potassium metabisulphite treatment to prevent browning reactions. Then, drained slices were dehydrated in a cabinet dryer for 18 hours at 65 °C. Dried slices were ground into a fine green banana powder. Proximate composition, antioxidant properties, and keeping quality of both varieties of green banana powder were evaluated. *Ambul* variety recorded the highest powder yield, crude fat, crude fiber, and moisture, whereas the highest crude protein and ash content was obtained in *Puwalu*. The potassium and phosphorus contents were predominant in both green banana powders, however, *Ambul* powder showed a higher value for both P and K contents. Total sugar content was significantly high in *Puwalu*. The *Ambul* powder contained higher vitamin C content. Both banana powders contained a higher degree of antioxidant properties. Total phenolic content and antioxidant capacity were found to be high in *Puwalu*, whereas the highest total flavonoid content was obtained in *Ambul* powder. For the shelf-life analysis, both powders could be stored for up to two months without noticeable changes in their quality characters. Based on the findings of this study, the production of green banana powder from *Ambul* and *Puwalu* varieties could be possible with acceptable quality characters and it can be used as a tool for the reduction of postharvest losses of banana. Further, research needs to be done on the incorporation of green banana powder in food preparations.

**Keywords:** *Ambul*, *Puwalu*, Dehydration, Green banana powder, Quality characters