

## EVALUATION OF ANTIOXIDANT PROPERTIES OF RAW AND BOILED BANANA PSEUDO-STEM

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### ABSTRACT

The banana pseudo-stem is a by-product of banana cultivation and is available throughout the year in Sri Lanka. It has many health beneficial properties, including antioxidant properties. Therefore, the present study was focused to evaluate the antioxidant properties, namely total phenolic content (TPC), total flavonoid content (TFC), and antioxidant capacity for raw and boiled banana pseudo-stem. Fresh banana pseudo-stem belonging to the “Kathali or Ambul” variety was collected in Kilinochchi district, Sri Lanka. The raw banana pseudo-stem samples were prepared after the removal of sheaths and unwanted materials. Further, it was ground to fine form using a motor and pestle. For the boiled samples, the cleaned banana pseudo-stem was boiled at 80° C for 10-15 minutes and ground to make a paste using a grinder. Antioxidant contents of ground raw and boiled samples were extracted using ethanol (70%) as a solvent and extracted samples were analyzed for antioxidant properties. The TPC (0.19±0.003, and 0.24±0.005 mg gallic acid equivalent/g dry matter, for the raw and boiled stem, respectively), and TFC (0.86 ± 0.023, and 0.94±0.031 mg catechin equivalent/g dry matter for the raw and boiled stem, respectively) were increased after boiling the banana pseudo-stem, whereas antioxidant capacity was significantly (p<0.05) reduced after boiling (0.58± 0.007 and 0.32±0.006 mg ascorbic acid equivalent/g dry matter for the raw and boiled stem, respectively) the pseudo-stem. Thus, both raw and boiled banana pseudo-stems are good sources of antioxidants and they could be used to prepare value-added food products.

**Keywords** – Antioxidant properties; Raw and boiled banana pseudo-stem; Solvent

