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Development of a dessert formulated with kithul flour (*Caryota urens*) as the gelatinizing agent

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Food habits in the world have started to change in the recent past and there is an increasing demand for vegetarian food. Gelatin being the main gelatinizing agent used in the food industry which is of animal origin, a non-animal origin substitute to meet the increasing demand is urgently needed. Kithul flour is one such herbal ingredient, which is highly underutilized, and which has a high medicinal value with gelatinizing properties that can be widely used in the food industry.

A dessert was produced with kithul flour by using wood apple pulp as the fruit base. Three dessert samples were prepared after several preliminary experiments with different flour and wood apple pulp ratios as 1:1, 1:1.5 and 1:2. Sensory evaluation was conducted subjectively using a 7-point hedonic scale, with 8 trained panelists and 12 untrained panelists. The results were analyzed using computer aided MINITAB 14 statistical analysis package according to Friedman test at 95% level of significance. Proximate analysis was carried out for the best sample which was identified by the above sensory test.

In the proximate analysis the carbohydrate, protein, fat and fiber contents were 65.16%, 0.14 0.12%, and 0.14% respectively. The mineral content was; iron 3.55 ppm, zinc 1.79 ppm, potassium 989.92 ppm, and sodium 459.5 ppm. The moisture content of the final product was 34.07%. Shelf life studies were carried out under the following four conditions; with and without preservatives (potassium sorbate) at room temperature (29 °C) and refrigerated conditions (5 °C). Microbiological analysis was done for yeast and moulds. Three dilution factors were applied (10^0 , 10^{-1} and 10^{-2}) and two replicates were carried out for each dilution. Colony formation was not observed in the sample prepared using potassium sorbate (330 ppm) as the preservative, even after three months of storage at room temperature. The selected best sample had a °Brix value of 26 and the pH value was 4.0, which automatically gives support to prevent microbial growth. As shown in the proximate analysis, energy from 100 g of the product is 262.28 kcal. The gel forming ability is an important functional property of kithul flour. This property can be used in the food industry not only for production of jellies, but also for several other applications including in jams.