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Chemical analysis of palmyrah (*Borrases flabellifer*) tuber flour produced in Jaffna and its application in traditional food (pittu) preparation

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This study was carried out to determine the chemical composition of palmyrah tuber flour produced in Jaffna and to evaluate the nutrient content and sensory attributes of its application in traditional food (pittu) preparation. Major nutrient and mineral contents of palmyrah tuber flour were analyzed using the AOAC (2005) method. The mineral content was assayed using the atomic absorption spectroscopy (AAS) method.

The moisture, total ash, crude protein, crude fat, crude fibre and available carbohydrate contents of palmyrah tuber flour were 10.5 ± 0.5 g $100g^{-1}$, 1.7 ± 0.01 g $100g^{-1}$, 6.6 ± 0.2 g $100g^{-1}$, 2.0 ± 0.03 g $100g^{-1}$, 0.8 ± 0.01 g $100g^{-1}$ and 78.4 ± 0.5 g $100g^{-1}$, respectively. It also revealed that Sodium, Potassium, Calcium and Magnesium in the flour were 12.5 ± 0.7 mg $100g^{-1}$, 387 ± 18 mg $100g^{-1}$, 54 ± 2 mg $100g^{-1}$ and 154 ± 6 mg $100g^{-1}$ respectively.

To study the possibility of the incorporation of palmyrah tuber flour in traditional food (pittu) and to evaluate its nutrient content sensory attributes, plain palmyrah tuber flour pittu, value added palmyrah pittu and wheat flour pittu were prepared. Only palmyarh tuber flour was used in plain palmyrah tuber flour pittu whereas onions and chillies too were incorporated in value added palmyrah tuber flour pittu. All three were subject to both proximate and sensory analyses and both types of palmyrah tuber flour pittu were then compared with wheat flour pittu.

This study revealed that there were no significant mean differences ($p<0.05$) between the analyzed sensory attributes of both types of palmyrah tuber flour pittu and wheat flour pittu. The total ash, crude fibre and available carbohydrate were higher in palmyrah tuber flour pittu than in wheat flour pittu whereas crude fat, moisture and crude protein were higher in wheat flour pittu.

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