

Development of Palmyrah Tuber Flour Incorporated Noodles and Analysis of its Physicochemical and Sensory Properties

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Noodles is one of the popular fast food items having good market demand. Palmyrah tuber flour with numerous health benefits can thus be a better option than wheat flour to make healthy noodles. The objective of this study was to develop palmyrah tuber flour (PTF) incorporated noodles and compare with wheat flour noodles (control). Five different ratios of wheat flour: PTF (45: 55, 55: 45, 65: 35, 75: 25, 100:00) were tested. Other ingredients used were salt (1.75%), carboxymethyl cellulose (0.30%), sodium bicarbonate (0.60%), coconut oil (7%) and water (35%). The best formulation was selected via sensory evaluation by 30 untrained panelists using a 9-point Hedonic scale. Noodles containing wheat flour: PTF in 35:65 ratio was chosen as the best formulation according to the sensory analysis. The selected noodles were compared with the control in terms of cooking quality, pH, moisture, nutritional composition, calorific value, total phenolic content, and yeast and mold count. Total phenolic content was in 2-fold greater abundance in PTF noodles (1.35 ± 0.07 mg/ g), indicating greater antioxidant capacity. Additionally, the PTF noodles contained calcium (0.01 mg/g) and magnesium (0.13mg/g) 3 times and 10 times greater abundance respectively as determined by titrimetric analysis. Yeast and mold count in both noodles complied with Sri Lanka Standard requirement for noodles. Fat (6.27%) and sugar (1.65%) contents of the PTF noodles satisfied the Food Act requirement, whereas the salt content (3.46%) exceeded the preferred limit. The PTF noodles were found to be inferior to the control noodles, in terms of cooking quality. The incorporation of PTF had increased the health values of the noodles as PTF has higher mineral (calcium and magnesium) and total phenolic content

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