

Formulation and process optimization of phalahari muffin produced from sugar, butter and sweet potato flour

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ABSTRACT : Intensification of use of local carbohydrate such as sweet potato is expected to minimize wheat consumption and support food diversification plan. The objective of this research was to optimize the ingredients and process situations in phalahari muffin production. This research was divided into three steps namely formula optimization using statistical design techniques, process optimization using response surface methodology and final product analysis. The formula and process optimization was based on sensory parameter using hedonic rating test involving 60 untrained panelists. The results showed that optimum formula was a formula with 35g sweet potato flour, 20g sugar, and 15g butter. The optimum baking situation was 30 minutes at 180 °C. Analysis of phalahari muffin made with optimum formula and process showed that phalahari muffin had hardness, springiness, cohesiveness, gumminess, chewiness, resilience, moisture, ash, protein, fat, reducing sugar, carbohydrate and crude fibre of 897.56gf, 0.61, 0.49, 386.60, 554.21, 0.24, 32.06%, 2.84%, 2.62%, 6.33%, 14.17%, 66%, and 0.80%, respectively.

Key Words: Phalahari muffin, sweet potato flour, sensory parameter, response surface methodology.