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"Solidarity in a competing world — fair use of resources"

Sensory Analysis and Nutritional Evaluation of Least-cost Formulated Saba Banana (Musa Paradisiaca L.) Peel-incorporated Hamburger Patty

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Abstract

The potential of Saba Banana Peel as extender in hamburger patty was investigated. The effect of Saba Banana Peel concentration (T1: 70/30 and T2: 50/50 ratio) on the sensory characteristics (Just-About-Right & penalty analysis) and consumer acceptability (9-point hedonic scale), physical and chemical properties, cooking yield and microbial quality of least-cost formulated hamburger patty was determined. Nutrient profile of Saba Banana Peel was characterised and compared with the commercially-available hamburger patty (control) to determine the least probable cost of production and nutrient estimate using the User's Friendly Feed Formulation Done Again® (UFFDA) Program.

Consumer acceptability testing (n=50) of patties incorporated with 50 % Saba Banana Peel showed no significant difference ($p > 0.05$) in acceptability level with the control in terms of colour, aroma, tenderness, juiciness, greasiness, saltiness, meaty-flavor aftertaste and overall acceptability. Penalty Analysis showed no significant drop in overall acceptability since majority of the respondents (>70 %) perceived that the sensory attributes of the Saba Banana Peel-incorporated patty and the control was 'just about right'.

Cooking yield of hamburger patty with 50 % Saba Banana Peel was highest and it showed decrease in microbial load ($3.8 \times 10\hat{}$/[3]cfug) that is within the acceptable limit. Output of the UFFDA programme revealed that patty with 50 % Saba Banana Peel is 25 % cheaper and has 100 % higher protein, 172 % lower carbohydrates and 300 % lower fat than the control.

Incorporation of 50 % Saba Banana Peel was found to be a good extender for improving the nutritional quality and lowering production cost without adverse effect in consumer acceptability.

Keywords: Consumer testing, JAR, penalty analysis, saba banana peel, UFFDA

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