NEW FORMULATION OF REDUCED FAT KAYA BY SUBSTITUTING COCONUT MILK WITH SOY MILK

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ABSTRACT

The aim of this final year project is to develop a reduced fat kaya by substituting coconut milk with soymilk. Soymilk was substituted according to the formulation of 70% soymilk, 30% coconut milk; 80% soymilk, 20% coconut milk and 90% soymilk, 10% coconut milk. In quantitative descriptive analysis (QDA), five of the attributes sweetness, firmness, spreadability, smoothness and adhesiveness were evaluated by ten trained panelists. Control kaya did not show significant difference with soymilk formulation kaya in sweetness, firmness and adhesiveness attributes, but for smoothness and spreadability attributes there were significant difference. In hedonic test, hundred untrained panelists participated to evaluate the acceptability of color, sweetness, aroma, spreadability, smoothness and overall of the kaya samples. Commercial Hi-fi kaya was significantly higher than soymilk formulation kaya in terms of acceptability of color, spreadability and smoothness. For acceptability of aroma, sweetness and overall characteristics, there is no significant different between commercial and soymilk formulation kaya. Panelists were required to rank kaya sample according to their order of preference. Besides the commercial kaya, 80% soymilk kaya is also preferred by the panelists. Total plate counts for four formulations kaya sample are less than 1x10⁴ cfu/g. According to food stuffs, cosmetics and disinfectants Act, 1972, this is safe to consume. For proximate analysis, 80% soymilk kaya has higher content of protein (7.81%), carbohydrates (40.58%), moisture (42.53%) and calcium (278.47%mg) than the control kaya. For fat and energy content, control kaya is higher than 80% soymilk kaya. Ash content for both of the formulation of kaya is similar. In the physical analysis, control kaya has lower water activity and pH compared with soymilk formulation kaya. Where else its total soluble solids are higher than 80% soymilk formulation. Finally, 80% soymilk kaya is 52.25% less of fat content compared to control kaya. This proved that, it is feasible to substitute coconut milk with soymilk in the formulation of kaya.