

PREPARATION AND QUALITY EVALUATION OF BURGER PATTIES USING ELEPHANT FOOT YAM (*Amorphophallus paeoniifolius*) AND LASIA STALKS (*Lasia spinosa*) REPLACERS

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ABSTRACT

Nowadays, meat-based processed foods are being developed with plant-based replacers to minimize the adverse effect caused by cholesterol and unsaturated fatty acids predominant in meat. Several underutilized plants have the potential to be used as meat replacer in processed meat-based products. In this study, elephant foot yam flour and lasia stalk flour were used as the replacers for the chicken burger patty. The treatments were developed with the composition of elephant foot yam, lasia stalk and chicken meat as T1(30 %, 30 %, 40%), T2(25 %, 25 %, 50 %), T3(25 %, 15 %, 60 %), T4(15 %, 25 %, 60 %) and T5(100 % chicken) respectively. Developed patties were tested for cooking properties, proximate and sensory analysis. According to the outcomes of the study, cooking properties such as cooking loss, cooking yield, water holding capacity, and shrinkage had significant variations ($p < 0.05$) among the treatments. The T1 and T3 had higher water holding capacity, higher cooking yield, lower shrinkage, and lower cooking loss compared to other compositions. The moisture content, protein, fat, fiber, and ash content also had significant differences ($p < 0.05$) among the treatments. Compared to the control, the patties incorporated with replacers had lower fat and higher fiber content. The highest sensory scores were obtained for color, flavor, and taste for the composition of T4 Whereas, T5 secured a higher score for the texture, odor, and overall acceptability. Conclusively, 25 % elephant foot yam flour and 15 % lasia stalk flour incorporated patties showed favourable physiochemical and sensory outcomes.

Keywords – Burger Patties; Elephant Foot Yam; Lasia Stalk; Replacers.

