

Abstract

The demand in gluten-free products is increasing as the trend in following a gluten-free diet is becoming more popular considering the perceived health benefits. However, developing a palatable gluten-free product is a challenge especially in creating a desirable mouthfeel, thereby, applying sourdough technology might be able to enhance the physical and sensorial properties. This project aims to develop an acceptable gluten-free sourdough pancake using gembili and modified cassava flours. The experimental pancakes included modified cassava flour to gembili ratios of 80:20 (G20), 70:30 (G30), 60:40 (G40), fermented using non-gluten sourdough starter made from brown rice flour. The methodology included preparation of the sourdough starter, production and fermentation, and pan-frying. The analyses done were percentage rise of batter during fermentation, physical analysis including color, specific volume and texture, and sensorial analysis. It is studied that moca provides firmness whereas gembili flour provides softness and cohesiveness. However, excessive amounts of gembili (as in sample G40) resulted in a structural breakdown, shown by the reductions in the texture parameters. Higher gembili content achieved higher percentage rise during fermentation due to the high inulin content. Nonetheless, gembili is unable to retain the gas produced, thus resulting in a decreasing specific volume. Sample G20 resulted in the most balanced flour ratio, shown by the insignificantly different physical and sensorial properties. These findings highlight the potential of gembili and modified cassava flours as alternatives to improve gluten-free pancake quality. Sourdough fermentation further enhances textural and appearance, offering a promising approach for gluten-free products.

Keywords: Gluten-free, Pancake, Physical Analysis, Sensory Analysis, Sourdough