

***Physicochemical and Functional Characteristics of Silk Taro Flour with Steaming and Fermentation as Functional Food Ingredients***

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***ABSTRACT***

*Silk taro is a local food that has the potential to be developed as an alternative food ingredient because it contains carbohydrates, dietary fiber, and resistant starch that are beneficial for health. Taro is processed into flour to increase its shelf life and expand its use in food products. Processing methods such as steaming and fermentation are known to affect the characteristics of the resulting flour. This study aims to determine the physical, chemical, and functional characteristics of silk taro flour based on different processing methods. The treatments used included no treatment, steaming, and fermentation followed by dehydrator. The results showed that the processing method affected the characteristics of silk taro flour. In terms of physical properties, the unprocessed treatment produced the brightest color with an  $L^*$  value of 81.6 and a yield of 23.78%, while the kamba density tended to be higher in the steamed treatment, namely 0.46 g/ml. In terms of chemical properties, the water content in the steamed treatment reached 10.32% and was lower in the fermented treatment at 10.05%, while the ash content showed a higher value in the fermented treatment at 2.37%. Carbohydrate content was relatively uniform across all treatments, at 77.25–77.50%. Dietary fiber and resistant starch appeared more dominant in the fermentation treatment at 4.36% and 16.53%, respectively. In terms of functional properties, swelling power and WHC were more prominent in the steaming treatment with values of 520.75% and 218.48%, respectively, while OHC showed a higher value in the fermentation treatment at 112.17%. Overall, the processing methods showed that fermentation has the potential to increase the functional value of flour, while steaming improves hydration properties and water absorption capacity, thus being suitable for food product development needs.*

***Keywords*** : *Physicochemical characteristics, processing methods, functional properties, silk taro flour*