

APPLICATION OF FERMENTATION TECHNOLOGY IN AFFECTING THE QUALITY OF BELITUNG TARO (*Xanthosoma sagittifolium*) DODOL

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ABSTRACT

Dodol, one of Indonesian traditional food, is very familiar among Indonesian. It has different names in several city in Indonesia, like *dodol* from Garut, *jenang* from Kudus, or *suwar-suwir* from Jember. Dodol is an intermediate moisture food (IMF) that has 0.60-0.80 water activity (A_w) which could trigger mold and yeast growth and make this product has short shelf life. Fermentation technology is applied to increase the shelf life of this product. Belitung taro was fermented for 36 hours and mixed with coconut milk, brown sugar, white sugar, and glutinous rice flour to make *dodol*. This study used three degrees of sugar concentration treatments : 30%, 40%, and 50% based on the initial weight of taro. These were evaluated by using 70 untrained panelists. The result showed that formula with 30% sugar was selected best. This formula was used for further analyses, such as pH, total titratable acid (TTA), and proximate analysis. Fermentation technology could decrease the product pH and prevent microbes growth for 40 days. The other commercial taro *dodols* have 10 days shelf life. However, deterioration of product quality during storage is one of this product weakness. The chemical interaction between the product and the environment could trigger lipid oxidation that made the product rancid. This could occur at the 19 days storage. Impermeable packages could overcome this problem.

Keywords: fermentation technology, dodol, Belitung taro, IMF, Indonesian food