

## ABSTRACT

Macarons is a type of cookies that well known as French pastries. Macarons main ingredients are sweet meringue and almond flour. Almond is a type of tree nuts, and it can be processed into many other ingredients. Almond flour is one of the products; it has high-fat content and moisture content. However, the almond tree cannot grow in Indonesia due to climate problems, so it needs to be imported. The *Gnetum gnemon* (Melinjo) is a plant native from Indonesia and grow in any part of Indonesia. Melinjo fruit can be used in the production of some dish (sayur asem), raw chips, even flour. The study performed by Yanti (2013), state that melinjo is abundant in Java Island, and the usage of melinjo flour can substitute the all-purpose flour in cookies making. So, the alternative in making macarons is to replace the almond flour into melinjo flour, which not only reducing the needed of almond flour but also increasing the usage of melinjo fruit. In this study, the formula for substitutions will be made; several percentages will be used. The percentage of almond flour by using melinjo substitution will be used 20%, 40%, 60%, and control. The macaron shells were analyzed for physical properties and sensorial properties. In the physical properties were included density analysis for macarons batter, moisture analysis, texture analysis, physical analysis (weight, width, and height) for macarons shells. While in sensorial properties, 9 points hedonic test was done, with parameters of aroma, sweetness, bitterness, chewiness, hardness, and overall liking. From physical properties results formulation using partial substitution of melinjo, 20% have the closest physical properties with formulations control. Moreover, the macarons made by partial substitution of melinjo 20% also the closet in sensorial properties with the macarons control. However, the macarons made by partial substitution of melinjo 60% also liked by the panelist based on the sensory results of overall liking. Further study is suggested to optimize the formulations, where the highest amount of melinjo flour could be used without reducing the physical and sensorial properties.