ABSTRACT

Risynawati. 24020120140124. **Diversification of Pumpkin (*Cucurbita moschata*) as Tape Product with Varying Yeast Concentrations and Fermentation Durations on Nutritional and Organoleptic Quality.** Guided by Arina Tri Lunggani, and Susiana Purwantisari.

Pumpkin (*Cucurbita moschata*) is a local plant with significant potential as an alternative raw material in the food processing industry, particularly in the production of tape, a popular food product in Indonesia. In the tape-making process, yeast and fermentation play a crucial role. Fermentation is an anaerobic metabolic process performed by microorganisms such as yeast to convert sugars into alcohol and organic acids. This process can influence the nutritional quality and organoleptic characteristics of the product. This study aimed to develop tape from yellow pumpkin with varying yeast concentrations of 0.5%, 1%, and 1.5%, and fermentation durations of 1, 2, and 3 days. Parameters tested included alcohol content using the distillation method, macroscopic characterization of microbial colonies, and microscopic characterization using Gram staining and methilen blue. Nutritional quality analysis covered moisture, protein, carbohydrate, fat, and ash content. Additionally, organoleptic testing was conducted using the hedonic scale method, where panelists rated their preference for the samples on a scale from 1 (strongly dislike) to 5 (strongly like). Data were analyzed using the Completely Randomized Design (CRD) method with a 5% confidence level. The results showed that the average alcohol content in yellow pumpkin tape ranged from 1.10% to 2.60%. Six isolates of lactic acid bacteria and two yeast isolates were identified. Yeast concentration and fermentation duration significantly affected protein, moisture, and carbohydrate content but had no significant impact on ash and fat content. Organoleptic tests indicated that panelists preferred the color, aroma, texture, and taste of tape with 1% yeast concentration and 3 days of fermentation.

Keywords: Fermentation, Tape, Lactic Acid Bacteria, Yeast, *Cucurbita moschata*.