

I. INTRODUCTION

1.1 Background

Food fermentation is a process of changing the chemical composition of organic substrates through enzyme activity produced by the microorganisms involved in it (Suprihatin 2010). Tapai is a fermented product made from boiled cassava and added yeast as a starter microbe in the manufacturing process. Muhiddin *et al.* (2019) in his research explained the number of microorganisms in tapai yeast, namely the type of mold as much as 1.0×10^4 cfu/g, yeast 8.0×10^3 cfu/g, and bacteria 5.7×10^4 cfu/g. Barus and Lydia (2011) reported that the amount of yeast found in cassava tape was 3.50×10^7 cfu/g and the presence of bacteria was 1.20×10^8 cfu/g – 5.50×10^8 cfu/g. Muchtadi and Sugiyono (2013) added that mold, including microflora, is present in tapai apart from bacteria. The groups of molds that can grow on the substrate are the genera *Aspergillus*, *Cephalosporium*, *Rhizopus*, *Penicillium*, *Mucor*, and *Neurospora*. These yeasts are the genera *Rhodotorula*, *Candida*, and *Saccharomyces* (Barus *et al.* 2013).

Subsequent studies also reported that lactic acid bacteria were found in tapai cassava, namely *L. fermentum*, *P. pentosaceus*, *L. kunkeei*, *L. plantarum*, and *Leuconostoc mesenteroides* (Sulistiani, 2020). According to Manin *et al.* (2012) lactic acid bacteria are generally indicated as probiotics. Manin *et al.* (2007) also added that the bacteria of the genus *Lactobacillus* proved to be a source of probiotics.

It is known that probiotics are one of the functional food groups where functional food is food and food ingredients that can provide additional benefits in addition to the basic nutritional function of the food in a certain community group

(IFT, 2005). Based on the presence of probiotics in cassava tapai, cassava tapai is the right choice to be used as functional food by people from an area. It is interesting to be able to know the exploration of the microflora found in cassava tapai found in the Padang market.

Usually people get tapai cassava found in traditional markets. The city of Padang has several managed markets, namely Pasar Bandar Buat, Pasar Indarung, Pasar Gaung, Pasar Simpang Haru, Pasar Raya, Pasar Tanah Kongsu, Pasar Pagi, Pasar Ulak Karang, Pasar Alai, Pasar Nanggalo, Pasar Belimbing, Pasar Kampung Kalawi, Pasar Lubuk Buaya, Pasar Simpang Tabing, Pasar Balai Gadang and Pasar Tarandam. Based on a survey at several Padang Markets, tapai was chosen from Pasar Bandar Buat as representatives of the local market and Pasar Raya as representatives of the Central Market in Padang. As additional information, research will be carried out in the form of biochemical tests in the form of tests for sugar content, alcohol content, pH tests, tests for the activity of amylase and cellulase enzymes contained in cassava tapai from Pasar Bandar Buat, Pasar Raya dan Pasar Lubuk Buaya in Padang.

1.2 Problem Formulation

1. What is the presence and proportion of microflora (bacteria, yeasts and molds) in cassava tapai from several market in Padang?
2. What are the amylase and cellulase enzyme activities of cassava tapai from several market in Padang?
3. What is the sugar content, pH and alcohol content of cassava tapai products from several market in Padang?

1.3 Research Objective

1. Determine the presence and proportion of microflora (bacteria, yeast and mold) in cassava tapai product from several market in Padang.
2. Analyzing the activity of amylase and cellulase enzymes in cassava tapai products in cassava tapai products from several market in Padang.
3. Determining sugar content, pH and alcohol content in cassava tapai from several market in Padang.

1.4 Benefit of Research

The results of this study are expected to provide scientific information to the public regarding cassava tapai which can be used as a functional food and thus increase the selling value of tapai for the people around Padang.

