

The Effect of starter fermentation time and the different volumes of starters in making nata de arenga

Ira Taskirawati¹, Surmi¹, Baharuddin¹ and Rahmat Safe'i²

¹Faculty of Forestry, Hasanuddin University, Jl Perintis Kemerdekaan Km. 10 Makassar Indonesia 90245

²Department of Forestry, Faculty of Agriculture, University of Lampung, Jln. Prof. Dr. Ir. Soemantri Brojonegoro No. 1, Gedong Meneng, Bandar Lampung, 35145, Indonesia

E-mail: tasqira@unhas.ac.id

Abstract. Nira derived from palm sugar (*Arenga pinnata* Merr.) can be made into several processed products such as brown sugar, vinegar, and wine. Nata de arenga is one of the products that utilizing from nira of palm sugar as one of the basic materials. This study aims to determine the Effect of starter fermentation time and the difference in the volume of starters for making nata from nira of *Arenga pinnata*. There are two stages used in this study; the first is making the starter, and the second is making nata. In the making of a starter, there are three starter fermentation's time, namely starter which fermentation for four days (F_1), six days (F_2), and eight days (F_3). In making nata, given the three different variations volume of starter, i.e., 100 ml (V_a), 200 ml (V_b), and 300 ml (V_c) combined with starter fermentation's time. Each treatment combination is three repetitions to enhance the validity of the results. The research data were then analyzed using a completely randomized design (CRD) with a factorial experiment. The results showed the highest average yield in the combination of starter treatment which fermented for eight days with a 300 ml volume of starter (F_3V_c). In this combination, the microbes in the fermentation medium are in optimum physiological conditions for the fermentation process.

Keywords: *Arenga pinnata*, nata, fermentation's time, volume of starters