

ABSTRACT

EFFECT OF HEATING TEMPERATURE OF PALM SUGAR ON CHEMICAL AND MICROBIOLOGY CHARACTERISTICS OF RUSIP

By

Novi Irawan

Rusip is a fermentation product from raw fish material (*Stolephorus sp*) made by adding between 20-30% and approximately 10% of palm sugar, and fermented for approximately 1-2 weeks anaerobic condition. Some previous research of rusip still lack the mold is still there. This is caused by the palm sugar addition as a substrate of fermentation. The purpose of this research is to study the effect of heating temperature treatment of palm sugar on chemical and microbiology characteristics of rusip that fermented for seven days and to determine the best heating temperature of palm sugar in each treatment. This research are arranged in Random Complete Block Design (RCBD) non factorial with 4 replications and 4 treatments by applying heating process in palm sugar addition. Variations of treatment are control/without heating sugar (R1), palm sugar in heating 60°C for 5 minutes (R2), palm sugar in heating 80°C for 5 minutes (R3), and palm sugar in heating 100°C for 5 minutes (R4). Obtained data analyzed by using *Barlett* test to find similarity range, furthermore the variety range tested with *Tuckey* test, And the data analysis conducted by *Least Significant Difference* test (LSD) at level 1% and 5%.

The results showed that heating temperature treatment of palm sugar has significant effect in pH rusip, and highly significant to the total acid, total molds, and total volatile nitrogen (TVN) of rusip, but it was not effected significantly on total lactic acid bacteria and total protein of rusip. Increasing of heating temperature of palm sugar used to reduce total molds in rusip. The best treatment in this reseach is rusip with 100°C palm sugar heating for 5 minutes. The characteristics of rusip were pH 5,66, total lactic acid 3,55%, total lactic acid bacteria 7,86 log cfu/g, total molds 1,15 log cfu/g, total volatile nitrogen 129,52 mg/100g, and total protein 10,20%.

Keywords: Rusip, heating temperatures of palm sugar