

**PENGARUH JENIS PATI RESISTEN
(TIPE III DAN IV TERMODIFIKASI) DARI BUAH SUKUN
TERHADAP SIFAT PREBIOTIK**

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ABSTRACT

Resistant starch is starch that can not be digested in the human intestine and have physiological effects that are beneficial to health such as being prebiotics. Prebiotics research on resistant starchs type of III and IV modified from breadfruit is rarely. This study was aimed to evaluate the potential prebiotic resistant starchs type of III and IV modified from breadfruit. Research used randomized complete block design (RAKL) with three replications and six levels of treatment : control of natural starch (S0K), retrogradasi (S3R), RS type of IV acetylation (S4A), RS type of IV phosphorylation (S4F), and glucose (S5G). The difference between the treatment means were assessed by ANOVA and continued with Least Significant Difference (LSD) at level of 5%. The results showed that the resistant starchs type of III and IV have prebiotic potency because these can be used as fermentation substrate of colonic bacteria to produce *Short Chain Fatty Acid* (SCFA). Based on pH, SCFA, ALB, and fermentability, the best treatment is S3R (resistant starch type of III retrogradation) with the characteristic as follows : pH value of 5.600, total lactic acid bacteria log 8.586 colonies / mL, total free fatty acid 0.824% and 51.113% fermentability.

Keywords: resistant starch, resistant starchs type III and IV, and prebiotic