"Studi Sinergisme Sinbiotik antara Prebiotik berbahan *Resistant Starch* Tipe III Ubi Jalar Ungu (*Ipomoea batatas* (L.) Lam.) dan Probiotik pada Yoghurt"

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan prebiotik berbahan *resistant starch* Tipe III Ubi Jalar Ungu terhadap pertumbuhan probiotik dan sinbiotik yoghurt. Selain itu, penelitian ini juga untuk mengetahui jumlah penambahan *resistant starch* Tipe III ubi jalar ungu yang terbaik pada pembuatan yoghurt sinbiotik. Rancangan yang digunakan dalam penelitian ini adalah Rancangan Acak Lengkap (RAL) dengan 6 perlakuan dan 3 ulangan. Data dianalisis secara statistika dengan uji F dan jika berbeda nyata, dilanjutkan dengan uji Duncan's New Multiple Range Test (DNMRT) pada taraf nyata 5%. Perlakuan pada penelitian ini menggunakan penambahan *resistant starch* Tipe III ubi jalar ungu sebanyak 0%, 1%, 2%, 3%, 4% dan 5%. Hasil penelitian menunjukkan bahwa penambahan *resistant starch* tipe III ubi jalar ungu berpengaruh nyata terhadap pertumbuhan *Lactobacillus acidophillus* (probiotik) pada yoghurt sinbiotik, ditandai dengan meningkatnya jumlah bakteri asam laktat. Perlakuan terbaik pada uji organoleptik yaitu pada produk D dengan penambahan *resistant starch* sebesar 3%. Panelis menyukai yoghurt sinbiotik perlakuan D dengan nilai penampakan 4,17, konsistensi 3,77, aroma 3,83 dan warna 3,07. Selain itu, juga diketahui bahwa yoghurt sinbiotik perlakuan terbaik memiliki kadar protein 1,01%, total padatan 34,42 %, pH 4,96, total asam tertitrasi 0,71 %, dan bakteri asam laktat 1,8 x 10^9 cfu/ml.

Kata Kunci : Yoghurt, Sinbiotik, *Resistant Starch* Tipe III, Ubi Jalar Ungu

The Study of Synbiotic Synergism of Prebiotik from Resistant Starch Type III Purple Sweet Potato (*Ipomoea batatas* (L.) Lam.) and Probiotic in the Yoghurt

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ABSTRACT

This research was aimed to know the effect of prebiotic addition from resistant starch type III purple sweet potato toward the growing of probiotic and synbiotic Yoghurt. In addition this research also knows the best additional resistant starch Type III from purple sweet potato in the process of making a yoghurt synbiotic. This research used Completely Randomized Designed (CRD) with 6 treatments and 3 repetitions. The data were analyzed statistically by using ANOVA and continued with Duncan's New Multiple Range Test (DNMRT) at 5% significance level. The treatment by added resistant starch Type III from purple sweet potato by 0%; 1%; 2%; 3%; 4%; and 5%. The result of this research showed that the added resistant starch type III purple sweet potato it can indicated by improve growth *Lactobacillus acidophillus* (probiotic) in the yoghurt synbiotic, that we can see from upgrading the total microbe lactat acid. The result of the best product in the organoleptic is the treatment D was the added 3 % resistant starch. The panelist like a yoghurt synbiotic the treatment D with the appearing score 4,17, consistency 3,77, aroma 3,83 and color 3,07. In addition the best treatment yoghurt synbiotic was the content of protein 1,01%, total solid 34,42 %, pH 4,96, total tytration acid 0,71 % and microbe lactat acid 1,8 x 10^9 cfu/ml.

Keywords : Yoghurt, Synbiotic, *Resistant Starch* Type III, purple sweet potato