PENGARUH LAMA PENYIMPANAN TERHADAP DAYA ANTIBAKTERI PRODUK NANOKAPSUL JUS KUNYIT (*Curcuma domestica* Val.)

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INTISARI [*)]

Penelitian ini bertujuan untuk mengetahui pengaruh lama penyimpanan terhadap daya antibakteri produk nanokapsul jus kunyit. Penelitian ini dilaksanakan pada tanggal 07 Oktober- 04 November 2019 di Laboratorium Mikrobiologi, Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta dan di laboratorium CV. Chem-mix Pratama, Bantul, Yogyakarta. Variabel yang di amati yaitu uji organoleptik, *Total Plate Count* (TPC), dan viskositas. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) pola searah dengan 5 macam perlakuan lama penyimpanan yaitu 0, 7, 14, 21, dan 28 hari, masing-masing diulang 3 kali. Data di analisis dengan analisis variansi, apabila terdapat pengaruh nyata antar perlakuan ($P<0,05$), dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa uji organoleptik nanokapsul jus kunyit yang disimpan hingga 28 hari mengalami pengentalan rata-rata pada uji TPC P0, P1, P2, P3 dan P4 yaitu berturut-turut 4.66 *Colony Forming Unit* (CFU)/ml, 16.33 CFU/ml, 17.66 CFU/ml, 19.66 CFU/ml, dan 23.33 CFU/ml. Rata-rata viskositas untuk P0, P1, P2, P3 dan P4 yaitu berturut-turut 4.60 centri Poison (cP), 6.70cP, 6.73cP, 4.83cP, dan 8.80cP. Dari penelitian ini dapat disimpulkan bahwa penyimpanan nanokapsul jus kunyit dengan lama penyimpanan 28 hari dapat digunakan karena koloni bakteri masih pada batas aman yaitu kurang dari 10^6.

Kata kunci: Daya Simpan, Nanokapsul Jus Kunyit, Uji TPC, Viskositas, Uji Organoleptik

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THE EFFECT OF STORAGE TIME ON ANTIBACTERIAL POWER OF TURMERIC (*Curcuma domestica* Val.) JUICE NANOCAPSUL PRODUCT

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ABSTRACT[*)]

This study aims to determine the effect of storage time on the antibacterial power of turmeric juice nanocapsule product. This research was conducted on October 7-November 4, 2019 in the Microbiology Laboratory, Faculty of Agroindustry, University of Mercu Buana Yogyakarta and in the laboratory of CV. Chem-mix Pratama, Bantul, Yogyakarta. Variables observed were organoleptic test, Total Plate Count (TPC), and viscosity. This study used a Completely Randomized Design (CRD) of one way pattern with 5 treatments of storage time of 0, 7, 14, 21, and 28 days, each treatment replicated for 3 times. Data were analyzed by analysis of variance, if there was a significant different between treatments ($P < 0.05$), continued by Duncan's New Multiple Range Test (DMRT). The results showed that the organoleptic test of turmeric juice nanocapsules stored up to 28 days experienced an average thickening in the TPC test P0, P1, P2, P3 and P4 respectively were 4.66 Colony Forming Unit (CFU) / ml, 16.33 CFU / ml, 17.66 CFU / ml, 19.66 CFU / ml, and 23.33 CFU / ml. The average viscosity for P0, P1, P2, P3 and P4 respectively was 4.60 centimeters Poison (cP), 6.70cP, 6.73cP, 4.83cP, and 8.80cP. From this study it could be concluded that the storage of turmeric juice nanocapsule with a storage time of 28 days could still be used because the bacterial colonies were still at a safe limit of less than 10^6.

Keywords: Storage Time, Turmeric Juice Nanocapsule, TPC Test, Viscosity, Organoleptic Test.

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