Karakteristik Kurva Isotherm Sorpsi Air Tepung Jagung Instan

Title	Karakteristik Kurva Isotherm Sorpsi Air Tepung Jagung Instan
Author Order	1 of 3
Accreditation	
Abstract	Instantiation of flour was expected to affect the equilibrium moisture content which changes the nature of the product. Instant corn flour as raw material of semi-moist foods should be determined of its equilibrium moisture content using the curve of moisture sorption isotherm. Curves of moisture sorption isotherm plays an important role in food drying system, particularly for predicting the shelf life of foods that have low water content. The research was aimed to obtain moisture sorption isotherm curve of instant corn flour from the four varieties of maize, and predicted using the BET (Brunauer-Emmett-Teller) and GAB (Guggenheim-Anderson-deBoer). Results of the study showed that the moisture sorption isotherm curve of instant corn flour had the sigmoid form (typeII) for all of variety. In most water activities, the moisture sorption isotherm curve of the instant corn flour were relevant to GAB model. BET model was more appropriate to estimate the value of water monolayer (primary bound water) and primary bound water in the instant corn flour; and the value obtained were 3.300 to 3.690 percent; respectively.ABSTRAKProses instanisasi tepung diperkirakan akan mempengaruhi kadar air kesetimbangan sehingga mengubah sifat produk. Tepung jagung instan, sebagai bahan baku pangan semi basah perlu ditentukan kadar air kesetimbangannya menggunakan kurva isotherm sorpsi air. Kurva isotherm sorpsi air (ISA) sangat berperan dalam sistem pengeringan makanan, terutama untuk memprediksi umur simpan makanan yang mempunyai kadar air rendah. Tujuan penelitian adalah untuk memperoleh kurva isotherm sorpsi air (ISA) tepung jagung instan dari empat varietas tepung jagung serta memprediksinya menggunakan metode BET (Brunauer-Emmett-Teller) dan GAB (Guggenheim-AndersondeBoer). Hasil penelitian menunjukkan bahwa kurva isotherm sorpsi air (ISA) tepung jagung instan mempunyai bentuk kurva isotherm sigmoid (tipe II) pada keempat varietas tepung jagung. Kurva ISA tepung jagung berdasar percobaan mendekati prediksi model GAB hampir pada semua aktivitas air. Model BET lebih tepat digunakan untuk menduga nilai lapisan air monolayer (air terikat primer) pada tepung jagung instan, dan nilai air terikat primer pada tepung jagung instan sebesar 3,300 sampai 3,690 persen.
Publisher Name	Faculty of Agricultural Technology, Universitas Gadjah Mada, Yogyakarta, Indonesia
Publish Date	2014-05-13
Publish Year	2014
Doi	DOI: 10.22146/agritech.9522
Citation	
Source	agriTECH
Source Issue	Vol 34, No 1 (2014)
Source Page	50-58
Url	https://jurnal.ugm.ac.id/agritech/article/view/9522/7097
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