

THERMAL PROPERTIES AND RESISTANT STARCH CONTENT OF GREEN BANANA FLOUR (*MUSA CAVENDISHII*) PRODUCED AT.



ABSTRACT

The objective of this research was to verify the effect of drying conditions on thermal properties and resistant starch content of green banana flour (*Musa cavendishii*). The green banana flour is a complex-carbohydrates source, mainly of resistant starch, and quantifying its gelatinization is important to understand how it affects food processing and the functional properties of the flour. The green banana flour was obtained by drying unripe peeled bananas (first stage of ripening) in a dryer tunnel at 52 °C, 55 °C and 58 °C and air velocity at 0.6 m s⁻¹, 1.0 m s⁻¹ and 1.4 m s⁻¹. The results obtained from differential scanning calorimetry (DSC) curves show a single endothermic transition and a flow of maximum heating at peak temperatures from (67.95 ± 0.31) °C to (68.63 ± 0.28) °C. ANOVA shows that only drying temperature influenced significantly (*P* < 0.05) the gelatinization peak temperature (Tp). Gelatinization enthalpy (ΔH) varied from 9.04 J g⁻¹ to 11.63 J g⁻¹ and no significant difference was observed for either temperature or air velocity. The resistant starch content of the flour produced varied from (40.9 ± 0.4) g/100 g to (58.5 ± 5.4) g/100 g, on dry basis (d. b.), and was influenced by the combination of drying conditions: flour produced at 55 °C/1.4 m s⁻¹ and 55 °C/1.0 m s⁻¹ presented higher content of resistant starch.

http://www.sciencedirect.com/science/article/pii/S002364380900005X

Autores: T.B. Tribess, J.P. Hernández-Uribe, M.G.C. Méndez-Montealvo, E.W. Menezes, L.A. Bello-Perez, C.C. Tadini*.

Revista: LWT - Food Science and Technology. Volume 42, Issue 5, pages 1022 – 1025.