Title Multiple Parameters for Prediction of Translucent Flesh in Mangosteens

Author S. Teerachaichayut, A. Terdwongworakul

Citation Program and Abstract. 2007 Australasian Postharvest Conference. Crowne Plaza Terrigal, NSW, Australia. 12 September 2007. 87 p.

Keywords mangosteen; translucent flesh

Abstract

Translucent flesh in mangosteen is a main defect that obstructs the exporting growth and prompts the need for non-destructive inspecting technique. The physical and chemical parameters of 257 mangosteen samples were determined as ratio of maximum diameter and minimum diameter (RMM), ratio of calyx weight and fruit weight (OW, density (DEN), averaged pericarp moisture content (AMC), and differential pericarp moisture content (DMC). Discriminant analyses were performed on the physical parameters to evaluate the accuracy of translucency classification validated by leave-one-out cross validation. The overall accuracy of classification was achieved using all parameters presenting 78.9% compared with 72% when using only DEN. The pericarp hardening samples and yellow gumming samples were found to influence the accuracy of the analysis. The results indicated the applicability of multiple parameters to evaluate the translucent flesh that objectively imitated the subjective indices employed by manual sorter.