

Sarasin Rattanasatian 2013: Classification of Translucent Mangosteen Using Multivariate Data Analysis Based on Mechanical and Physical Properties. Master of Engineering (Agricultural Engineering), Major Field: Agricultural Engineering, Department of Agricultural Engineering. Thesis Advisor: Associate Professor Anupun Terdwongworakul, Ph.D. 82 pages.

Translucent mangosteen is one of the most important problems which causes low quality mangosteen for export and is not easily differentiated. Successful technique for accurate detection of translucent mangosteen is complicated and expensive. This research investigated application of pendulum oscillation to determine oscillating time, floating orientation characteristic and specific gravity data of which were used to build multivariate discriminant model. A set of 189 export standard mangosteens were used in the investigation. From discriminant analysis, the result showed that the obtained model could be used to segregate mangosteens into normal and translucent groups with accuracy of 79.9%. The most important parameter in discrimination was specific gravity with floating orientation characteristic and oscillating time for less importance respectively.

Student's signature

Thesis Advisor's signature

____/____/____