

Title Feasibility study on evaluation of internal quality of red pitaya using near infrared spectroscopy

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Abstract

The feasibility study was carried out to evaluate the internal quality of red pitaya by using interactance type near infrared (NIR) spectroscopy. NIR spectra were obtained in the range of 800-1000 nm at the 4 measuring points on each fruit. The second derivative spectra of each point were analyzed by partial least square regression (PLSR) analysis. Correlation coefficients (R) and standard error of prediction (SEP) value for the prediction model, which were obtained using PLSR of the hue color value, water content, and soluble solids content were 0.31 (0.22), 0.36 (7.0), 0.47 (1.6), 0.27 (1.5), 0.60 (0.047), 0.67 (0.77), respectively. These results showed that the internal quality of red pitaya is able to be evaluated by using NIR.