

Title Effect of hot water treatment on physico-chemical properties of papaya (*Carica papaya* var. Sekaki) during ripening

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Abstract

This study was conducted to evaluate the effect of hot water treatment on physico-chemical properties of papaya (*Carica papaya* var. Sekaki) during ripening. The experiment was done by dipping the papaya twice in hot water that reached temperature of 42°C for 30 minutes and 49 °C for 20 minutes, whilst the untreated papaya was considered the control. Physico-chemical characteristics namely pH, total titratable acidity, ascorbic acid content, total soluble solid, colour, texture, weight loss, general appearances, disease, respiration rate, ethylene production and ACC oxidase activity were observed during storage at ambient. During ripening process at ambient, the physico-chemical parameters of papaya were changed significantly ($p < 0.05$). However, there are no significant difference ($p > 0.05$) between treatments in all parameters except for general appearances. The hot water treatment gave better appearance which maintained smooth skin compared to control which develop rough skin, symptom like black spot after being stored for several days. Sekaki papaya treated with hot water treatment was free from anthracnose disease while control papaya developed anthracnose disease after 6 days of ripening. The results seemed to suggest that hot water treatment did not affect the physico-chemical changes of Sekaki papaya but maintained the good appearance and prevented diseases during ripening.