

Title Color Development and Fruit Quality of Mangosteen Fruit after Harvest
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Abstract

Mangosteen is a climacteric fruit, with an outer pericarp that is purple when it becomes mature. The edible aril is white, soft and juicy with a sweet, slightly acid taste and pleasant aroma. We have studied anthocyanin compounds and effects of fruit maturity on quality of mangosteen fruit after harvest. Fruit at different stages of maturity (scattered pinkish to dark purple) were harvested and kept at 25°C (85-90% RH). Fruit from each stage of maturity finally developed to the dark purple (stage 6) during the postharvest period. Anthocyanin contents in the outer pericarp were higher than in the inner pericarp and increased to a maximum at stage 6. There were no significant differences in anthocyanin contents in the pericarp of fruit that had been harvested at different stages (1-6) once the fruit had reached the dark purple (stage 6). Anthocyanin composition in the pericarp included cyanin-3-sophoroside and cyanin-3-glucoside. In addition, we found new anthocyanin derivatives, including delphinidin and peonidin, which correlated with colour development. Sensory evaluation and hue angle values of fruit harvested at different stages were not significantly different once the fruit had finally developed to the dark purple (stage 6).