

Title Comparison of bioactive compounds, antioxidant and antiproliferative activities of Mon Thong durian during ripening

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Abstract

The aim of this investigation was to compare the bioactive and nutrient compounds, fatty acids, and antioxidant and antiproliferative activities of Mon Thong durian at different stages of ripening. It was found that the total polyphenols, flavonoids, flavanols, ascorbic acid, tannins and the antioxidant activity determined by four assays (CUPRAC, DPPH, ABTS and FRAP) differed in immature, mature, ripe and overripe samples. The content of polyphenols and antioxidant activity were the highest in overripe durian, flavonoids were the highest in ripe durian, and flavanols and antiproliferative activity were the highest in mature durian ($p < 0.05$). FTIR spectra of polyphenols, HPLC profiles of fatty acids, the antioxidant and antiproliferative activities can be used as indicators to characterise different stages of durian ripening.