

Title UV radiation-induced changes of antioxidant capacity of fresh-cut tropical fruits
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Citation Innovative Food Science & Emerging Technologies, Volume 10, Issue 4, October 2009, Pages 512-516
Keywords Antioxidant; Phenols; Flavonoids; Vitamin C; Ultraviolet radiation; Fresh-cut fruit

Abstract

The effect of ultraviolet (UV-C) treatment on total phenol, flavonoid, and vitamin C content of fresh-cut honey pineapple, banana “pisang mas”, and guava was investigated. The antioxidant capacity of the fruit also was evaluated by measuring its ferric reducing/antioxidant power (FRAP) and DPPH free radical-scavenging activity. The fresh-cut fruits were exposed to UV-C for 0, 10, 20, and 30 min. Total phenol and flavonoid contents of guava and banana increased significantly with the increase in treatment time. In pineapple, the increase in total phenol content was insignificant, but the flavonoid content increased significantly after 10 min of treatment. UV-C treatment decreased the vitamin C content of all three fruits. In fresh-cut banana, longer treatment time resulted in higher FRAP and DPPH values; these values remained stable throughout the experiment for fresh-cut pineapple. For fresh-cut guava, FRAP and DPPH values were stable until 30 min, after which a significant increase in FRAP values occurred.