

Title Improving postharvest quality of mango 'Haden' by UV-C treatment
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Abstract

It is well known that UV-C irradiation increases the shelf life of different fruits. However, the biochemical changes associated with these responses are not well understood in tropical fruits. The objective of this work was to study the effects of UV-C treatment on the biochemistry and quality of mango fruit. Mangos cv 'Haden' were exposed to UV-C irradiation energy levels of 2.46 and 4.93 kJ m⁻² and then stored for 18 days at 25 °C. Total phenols (TP), total flavonoids (TF), enzymatic activity of phenylalanine ammonia-lyase (PAL) and lipoxygenase (LOX) were measured at 0, 0.5, 1, 8, 16, and 24 h and thereafter every 3 days. Decay and overall appearance (OA) were evaluated every 2 days with a hedonic scale. UV-C treatment maintained better OA, lower decay percentage and increased shelf life of fruit. These benefits correlated positively with higher levels of TP, TF, LOX and PAL. We conclude that UV-C treatment can be a good alternative to increase the shelf life in optimal conditions of mango 'Haden'.