

Title Blueberry fruit response to postharvest application of ultraviolet radiation
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Abstract

Blueberries (*Vaccinium corymbosum*, cvs. Collins, Bluecrop) were exposed to ultraviolet light-C (UV-C) radiation treatments from 0 to 4 kJ/m² prior to 7 days storage at 5 °C plus 2 days at 20 °C, 90% RH. Weight loss and firmness were not affected by light treatment. Decay incidence from ripe rot (*Colletotrichum acutatum*, syn. *C. gloeosporioides*) on fruit was decreased by 10% with 1–4 kJ/m² UV-C light treatments. Antioxidants as measured by total anthocyanin, total phenolics, and ferric reducing antioxidant power (FRAP) were higher in ‘Collins’ fruit given 0 or 1 kJ/m² UV-C compared to unstored fruit. In ‘Bluecrop’, total anthocyanin content and FRAP values increased with treatment intensity, with highest values seen in fruit given 2 or 4 kJ/m² UV-C, but no clear treatment effects were seen in total phenolic content. These results indicate that postharvest application of UV-C radiation can decrease decay caused by ripe rot in blueberries and may enhance antioxidant levels.