

Title Impact of UV-C light on safety and quality of fresh-cut melon
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Abstract

The effectiveness of UV-C light exposure on safety and quality of fresh-cut fruit was investigated with reference to melon cubes. UV-C light was applied during cutting operations and before packaging. Melon cubes were then analysed for microbial counts, colour, firmness, juice leakage, sensory properties and preference during storage at 6 °C for up to 14 days. Fruit exposure to UV-C light led to 2 log reductions for both total viable count and *Enterobacteriaceae*, whose counts remained 2 log units lower than that of the untreated sample during storage. No significant effect of UV-C light treatment on product colour and firmness was detected during storage. By contrast, the exposure to UV-C light decreased melon leakage, probably due to the formation of a thin dried film on the product surface. UV-C treated samples were also associated to a better flavour which made them significantly preferred to the untreated ones. UV-C light treatment was demonstrated to be a high potential novel technology for surface decontamination of ready-to-eat food surface.