

**Title** Effects of UV-C illumination on antioxidant capacity and postharvest quality of intact and extracted pomegranate arils

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#### **Abstract**

In this study, the effects of UV-C illumination on antioxidant capacity and postharvest quality of Hicaznar pomegranate were investigated. For that purpose, 2.1 kJ/m<sup>2</sup> and 4.5 kJ/m<sup>2</sup> UV-C dosages were applied to the intact and extracted pomegranates. After UV -C illumination, intact pomegranate were stored at 6°C and extracted arils were stored at 2 and 4°C. The longer storage period has resulted in the higher antioxidant capacity in the intact and extracted UV-C illuminated arils. The arils stored at 2°C were higher in the amount of ascorbic acid, titratable acidity, phenolic substances and soluble solids content than the arils stored at 4°C. In intact and extracted arils, the illumination of UV-C has always produced a positive effect on reduction of fungal decays as well. The arils of pomegranate can be stored for 20 days with minimal quality changes at 2°C.