

Title Antioxidant stability of small fruits in postharvest storage at room and refrigerator temperatures

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Abstract

Strawberries (*Fragaria ananassa*), raspberries (*Rubus idaeus*) and red currants (*Ribes rubrum*), as well as two drupes, cherries (*Prunus avium*), and sour cherries (*Prunus cerasus*), were subjected to two storage temperatures (4 °C and 25 °C) and phytochemicals concentrations (total phenols, flavonoids and anthocyanins) as well as antioxidant capacity (DPPH, ABTS and FRAP assays) were monitored until the fruit visually spoiled. Red currants and strawberries exhibited the highest initial total phenol (TP) contents (322.40 ± 5.56 and 335.47 ± 6.12 mg GAE/100 g FW, respectively) and maintained the highest TP contents throughout storage at both temperatures. Storage of at 25 °C as opposed to 4 °C, facilitated faster spoilage of analyzed fruits. In addition, most fruits stored at 4 °C, exhibited slightly higher antioxidant activity values at the end of storage according to all three antioxidant activity assays as opposed to fruits stored at 25 °C. The dynamic evolution of antioxidant capacity at both temperatures reflected the transient changes in phytochemical composition of small fruits in storage.