

Title Effect of harvest date on cold storage and postharvest quality of plum cv. Green Gage
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Citation Postharvest Biology and Technology, Volume 47, Issue 3, March 2008, Pages 325-332
Keywords *Prunus domestica*; Harvesting date; Cold storage; Maturity; Storage life; Quality

Abstract

European plums (*Prunus domestica* L.) cv. 'Green Gage' were harvested on several dates before the commercial harvesting date. After cold storage for 10, 20, 30 and 40 days at 2 °C, the fruit was analysed for weight loss, flesh firmness, total soluble solids (TSS), titratable acidity (TA) and skin ground colour. Plums were ripened for 3 days at 20 °C after storage and were investigated at 10 examination stages during storage and after ripening. Significant differences were found in fruit mass, weight loss, skin colour, firmness, TSS and TA between harvest dates during storage and after ripening. An increase in fruit mass, TSS and skin colour was observed in plums during the harvesting period, whereas flesh firmness decreased significantly during the same period. Significant changes were also noted in fruit mass, skin colour, firmness and TSS during ripening. In general, at room temperature TSS increased, whereas firmness decreased. Less mature fruit withstood cold storage better than more mature fruit. However, less mature fruit had lesser quality when ripened than mature fruit. It is suggested that the best poststorage quality of 'Green Gage' plums would be obtained when fruit were harvested with a skin ground colour between -12 and -13 measured with a colorimeter as a^* and a flesh firmness between 35 and 40 N. A lesser degree of harvest maturity was associated with inability of fruit to ripen because fruit picked too early stayed firmer over the whole storage period.