



## Effect of Different Harvest Dates on the Quality of Beauty and Japanese Plum Fruits after Ripening

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**Abstract** :Plum fruits considered as a good source of natural antioxidant substances. Consumer acceptance and market life of plum fruit (*Prunus salicina* L.) were extremely dependent on harvest date. Two plum cultivars, 'Beauty' and 'Japanese' were harvested at different commercial maturity stage and then ripened at 20°C for 7 days during two successive seasons 2013 and 2014. Plum fruit quality attributes were studied for carbon dioxide production, oxygen uptake, skin and flesh color, fruit firmness (N), soluble solids content (SSC), total acidity, SSC/acid ratio, ascorbic acid (vitamin C), and total anthocyanin content. Fruit quality parameters appeared significant differences throughout different dates of harvesting and after ripening. In both cultivars, CO<sub>2</sub> production showed fewer increase than O<sub>2</sub> uptake as a result of harvest dates. Meanwhile, the opposite trend were noticed after ripening. Plum color parameters as L\*, Hue angle and Chroma were significantly varied in both cultivars, either in skin or flesh fruit. A significant increase in SSC, SSC: acidity ratio and ascorbic acid were observed while flesh firmness and total acidity were decreased at the same date. The highest content of anthocyanin of fruit skin was noticed at the late harvest date. Therefore, plum fruit with more mature was better than less mature one, which had lesser quality when ripened. Less maturity harvest grade was accompanying with inability of plum fruit to ripen for its remaining firmer after harvest.

**Key words**:Plums, Fruit quality, Harvesting dates, Skin color,Ascorbic acid, Anthocyanin andRipening index.