

**Title** Variation in vase life of cut rose cultivars and soluble carbohydrates content  
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### **Abstract**

Postharvest characteristics of 10 major *Rosa hybrida* cultivars grown in Iran were investigated. The way of flower opening varied among cultivars, the cut flowers of some cultivars did not open completely. The vase life was markedly cultivar specific; it was shortest in 'Black Magic' (5.6 d) and longest in 'Maroussia' (14.3 d). Factors affecting the cultivar-specific vase life of cut roses were evaluated. No correlation between vase life and transpiration was found. Treatment with sucrose plus 8-hydroxyquinoline (HQC) markedly promoted petal reflection and inhibited blueing. Concentrations of glucose, fructose and sucrose in petals of some cultivars with better longevity were much higher than in others. There was no difference among cultivars in soluble carbohydrate concentrations in stems. Ethylene production among cultivars was different and long-lived cultivars produced less ethylene than short-lived. The results suggest that the longer vase life of some cultivars may be attributed to higher soluble carbohydrate concentrations in petals and a low ethylene production of the flowers.