

**Title** Effect of ascorbic acid on antioxidant capacity during senescence of ruyal class rose

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**Keyword** Rose; ascorbic acid; senescence

#### **Abstract**

The current study was conducted to determine effects of ascorbic acid treatment on postharvest life and antioxidant activity of cut 'Ruyal Class' rose flowers. Pulsing treatment of ascorbic acid in 100 ppm for 12 h at 22°C on three developmental stages (Bud stage, full blooming and senescence) of cut 'Ruyal Class' rose flowers was investigated. The vase solution having ascorbic acid significantly increased cumulative uptake of vase solution, vase life compared to the controls. Rows were kept in vase solution for short time also exhibited lower lipid peroxidation, higher soluble protein, antioxidant activity and anthocyanin concentration at each three developmental stage. Anthocyanin and protein concentration in petals was increased at senescence stage. Overall, ascorbic acid can be effective treatment for increasing vase life of rose cut flowers.