Title Effects of STS, akacid and 8-hydroxy-quinoline sulfate on the vase life and colony count of preservative solution in *Lilium candidum*

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Citation ISHS Acta Horticulturae 900:289-294.2011.

Keywords cut flower; microorganisms;*Liliaceae*

Abstract

Two levels of pulse treatment (silver thiosulfate, STS, 98.7 mg L^{-1}, equivalent to 0.59 mM L^{-1} silver and distilled water; each for 6 h) and 9 levels of preservative mixtures (silver nitrate at 25, 50 and 70 mg L^{-1}, equivalent to 0.15, 0.3 and 0.41 mM L^{-1} silver respectively; 8-hydroxyquinoline sulfate at 150, 300, 450 mg L^{-1}; Akacid with concentrations of 100, 300 and 500 mg L^{-1}) were investigated for their effects on vase life of *Lilium candidum*. The experiment was conducted in a randomized design factorial arrangement (2×9). Silver nitrate in preservative mixtures in applied concentrations yielded the lowest vase life and colony count. Akacid, while proving effective in reducing the bacterial colony count, also increased vase life at 500 mg L^{-1} without STS pretreatment. 300 mg L^{-1} 8-HQS caused the highest vase life. A positive and significant correlation between vase life and colony count was seen which raises the possibility that not all bacteria are detrimental to cut flower vase life.