

**Title** Synergistic effect of STS and cool storage on postharvest performance of cut spikes of *Consolida ajacis* cv. violet blue

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**Citation** Horticulture, Environment, and Biotechnology, 52, Number 5, 466-470, 2011

**Keywords** blooming; fresh and dry mass; silver thiosulphate; soluble proteins; vase life

### **Abstract**

Cut spikes of *Consolida ajacis* cv. Violet Blue were used for the study. The ethylene antagonist (STS) was used in combination with cool storage for 72 h at 5°C to assess the synergistic effect of both chemical and temperature treatment on postharvest performance of cut spikes. The spikes were divided into three sets, one set was pretreated with STS (1 h Pulse) prior to wet storage at 5°C for 72 h, while the other set was pretreated after 72 h cool wet storage. The third set of spikes was cool stored (at 5°C) for 72 h but kept unpulsed, which represented control. After 72 h storage, the spikes from all the three sets were transferred to flasks containing distilled water (DW) or 0.2 M sucrose + 100 mg·L<sup>-1</sup> 8-HQS (SUC + HQS). Pretreatment of spikes with STS before or after wet storage resulted in an improved postharvest performance as compared to the controls. Maximum vase life of about 18 days was shown by spikes pretreated with STS prior to storage and transferred to SUC + HQS as compared to controls which registered a vase life of 10 days in DW and 13 days in SUC + HQS (0.2 M sucrose + 100 mg·L<sup>-1</sup> 8-HQS). Flower diameter, fresh and dry mass was markedly increased in the samples from spikes transferred to SUC + HQS. Correlation between soluble protein content in sepals and vase life was positive. The results show that soluble protein content in sepals is an important factor in determining the vase life of cut spikes of *Consolida ajacis* cv. Violet Blue. The study recommends that pulsing the spikes with 0.5 mM STS prior to 72 h wet storage at 5°C and transferring them to holding solution containing SUC + HQS, can be used as a storage/chemical treatment to improve the postharvest performance of this cut flower.

<http://www.springerlink.com/content/3v63211200171527/fulltext.pdf>