

Title Postharvest handling procedures of *Matthiola incana* ‘Vivas Blue’
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Abstract

Cut stems of stock [*Matthiola incana* (L.) R. Br.] ‘Vivas Blue’, a new cultivar, were harvested when at least one floret was open for postharvest testing. Stems were unaffected by exogenous ethylene or by the application of the anti-ethylene agents silver thiosulfate and 1-methylcyclopropene. Stems had a longer vase life when stored dry, as compared to being stored in water, for no more than 2 weeks. Stems held at 2 °C had a significantly longer vase life, 13.3 d, than stems that were not stored in the cold, 9.9 d. No significant differences in vase life, number of open buds, or termination criteria occurred when stems were pulsed with 0, 10, or 20% sucrose. Stems had a longer vase life, 20.3 d, when placed in foam and a 2% sucrose solution with a bactericide as compared to 0 or 4% sucrose in water with a bactericide. Additionally, stems held in foam and 2% sucrose or in 4% sucrose without foam, but with a bactericide, developed a deep purple color over time. Bud opening increased as sucrose concentration increased regardless of floral foam use. Various commercial preservatives did not result in significant differences in vase life, number of open buds, or termination criteria. Vase life was longer, 12.1–13.0 d, when solutions were made from deionized water than when the solutions were made from tap water, 11.3 d.