Abstract

The study was conducted in a factorial experiment with complete randomized design. The experimental treatments were succinic acid (0. 1.5, 3 mM), malic acid (0. 1.5, 3 mM) and glutamine (0 and 5 mM). One external control treatment was included (200 mg l^{-1} HQS). Changes of the chlorophyll index of leaves (SPAD), flower diameter increase, wet weight reduction, MDA content, absorbed vase solution and visual quality were measured at 8th day of experiment. Vase life was measured as the number of days after start until end ofthe experiment. The results indicated that experimental treatments significantly affected flower parameters. The highest SP AD value was observed in $M_3S_0G_5$ and $M_0S_3G_0$, which were significantly different from external control. Regarding the vase life, the best treatments were $M_3S_0G_5$ and $M_0S_0G_5$ 15 and 14.6 days, which were significantly different from external control (200 mg l^{-1} HQS) with 12.3 days and 11.7 days in distilled water. The superior treatments showed least wet weight reduction in the course of experiment, were in the statistical group with least MDA content, and had highest visual quality in day 8 of experiment, while being in the middle group in increase of flower diameter. Interestingly the treatment containing just succinic acid had the least EC, which indicates its possible positive effect on membrane, but due the applied concentrations here was mostly ineffective and in cases showed antagonistic interactions with other experimental factors. Glutamine had a profound effect on vase life both alone and in combination with malic acid and appears promising for further work.