Title Evaluation of SNP and boric acid on longevity and quality of cut rose "Yellow Island"

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Abstract

Effect of pulse treatment of silver nano particles (0, 5, 10, and 15 mg/L) and boric acid (0, 100, 200 and 300 mg/L) were evaluated in a factorial experiment based on RCBD in 3 replications. In this study, vase life, ethylene production, chlorophyll index, amount of β-carotene in petals and number of bacterial colonies in stem end were measured. Effect of boric acid, nano-silver and interaction effect of them on vase life, ethylene production and amount of β-carotene in petals were significant (p~0.01). Nano-silver had significant effect on the number of bacterial colonies in stem end (p~0.0l), but had no significant effect on chlorophyll index. The most vase life was observed in 100 mg/L boric acid (9.69 days), the least ethylene production (0.59 nl/l/h/g) was obtained in 100 mg/L boric acid and 5 mg/L nano-silver, while ethylene production in the control plants was 2.42 nl/l/h/g. All concentrations of SNP decreased microbial loud of stem end compared to the control flowers. Boric acid diminished the amount of β-carotene in petals but SNP had positive effect on this trait.