

Title The responses of cut carnation 'Tempo' to 1-MCP

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Abstract

Water uptake and chlorophyll content are two important factors in postharvest quality of cut carnations (*Dianthus caryophyllus* L.). 1-MCP (1 - methylcyclopropene), as a gaseous inhibitor of ethylene action, increases water uptake and chlorophyll content of cut carnation. The effects of 1-MCP depend on concentration and application time duration. In this experiment, the effect of different 1-MCP concentrations (0, 20, 40, 60, 80 and 100 nl l^{-1}) and time durations (3, 6 and 9 hr) on water uptake, chlorophyll index and loss of fresh weight were studied. Cut flowers were kept in the postharvest room with $\text{mol s}^{-1} \text{m}^{-2}$ light intensity and 12 hr μC , 60 - 70 % RH, 15 -20 ° 2 ± 20 photoperiod. The effect of 1-MCP concentrations and interaction between 1-MCP concentrations and time duration on water uptake, chlorophyll index and loss of 1%). 60 nl l^{-1} 1-MCP with 2.41 ml g^{-1} F.W water \leq fresh weight were significant (P uptake and 3.76 chlorophyll index and 1.924 g loss of fresh weight per one cut flower, was better than other treatments.