

Title Effects of ethylene and cytokinins on vase life of cut *Eucalyptus parvifolia* Cambage branches

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Abstract

The role of ethylene and cytokinins was investigated during postharvest senescence of cut *Eucalyptus parvifolia* Cambage branches. The effect of endogenous and exogenous ethylene on the vase life of the cut branches was studied using 2 mM 1-aminocyclopropane-1-carboxylic acid (ACC) as a continuous treatment or "pulse" treatment for 48 h with 20, 40 and 80 ml l⁻¹ ethylene. Both endogenous and exogenous ethylene reduced the vase life of the branches; however, the effect of the endogenous hormone was stronger than the exogenous applications. Ethylene biosynthesis was inhibited by pulse treatment for 24 h using 1 mM AOA or 2 mM CoCl₂. The latter treatment significantly extended the vase life of the branches by delaying senescence. The effect of cytokinins was evaluated on the vase life of cut *E. parvifolia* branches by pulse treatment for 24 h with 10, 50 and 100 mM thidiazuron (TDZ) or 85, 130 and 260 mM N⁶-benzyladenine (BA). The results obtained showed that no response was observed following pulse treatment with BA while, although TDZ had little effect on vase life, it was a good inhibitor of chlorophyll degradation.