Title Effect of 1-MCP prestorage treatment on ethylene and CO_2 production and quality of 'Hayward' kiwifruit during shelf-life after short, medium and long term cold storage

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Abstract

The effect of 1-MCP prestorage treatment was studied during short, medium and long term cold storage with subsequent exposures at 20 °C (shelf-life) on ethylene and CO_2 production, softening, soluble solids contents, titratable acidity, color and decay of 'Hayward' kiwifruit (*Actinidia deliciosa* (A. Chev.) C.F. Liang et A.R. Ferguson). Application of 1-MCP suppressed or decreased ethylene production during shelf-life at all storage periods. Also, 1-MCP reduced CO_2 production during shelf-life after medium and long term cold storage. Application of 1-MCP significantly delayed the softening of kiwifruit at 20 °C for 14 days, after short and medium term cold storage, with no affect during shelf-life after long term cold storage. 1-MCP did not affect soluble solids contents, and during shelf-life after short and medium term cold storage, titratable acidity was higher for 1-MCP treated fruit. 1-MCP also delayed decay development caused by *Botrytis cinerea* and changes in the flesh color parameters lightness and chroma during shelf-life.