

Title An alternative to extending postharvest quality of *Dendrobium Water Oumae* (4N) inflorescences using 1-MCP fumigation

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Abstract

1-Methylcyclopropene (1-MCP) gas has been reported to delay plant senescence. The effect of 1-MCP on the postharvest quality and display-life of *Dendrobium Water Oumae* (4N) was investigated. Sprays of *Dendrobium Water Oumae* (4N) were harvested with 4-5 open florets. They were placed in sealed plastic containers and fumigated with 1-MCP at 100, 200 or 400 nL.L⁻¹ at 25°C for 1.5 h compared to unfumigated flower (control). Thereafter, they were transferred and held in a vase solution containing 2% glucose + 150 mg.L⁻¹ 8-HQS and treated with 1-MCP at 400 nL.L⁻¹ reduced flower wilting. All concentrations of 1-MCP (100, 200, 400 nL.L⁻¹) significantly reduced flower abscission. However, 1-MCP did not affect water uptake of orchid sprays compared to the control. Sprays treated with 1-MCP had longer display life (30 days compared to 26 days for the control). In conclusion, 1-MCP fumigation may be used as an alternative for extending the postharvest quality of orchid inflorescences before export or transport to customer.