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Influences of Duration and Temperature of Storage and Treatment on the Efficacy of 1-Methylcyclopropylamine on Apple Fruit

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Influences of duration and storage temperature between harvest and (1-MCP) treatment on the storability of 'Fuji' apple (*Malus pumila*) were investigated. Fruit were treated with $1 \mu\text{L}\cdot\text{L}^{-1}$ 1-MCP for 18 hours after harvest or at 8, 15 or 22 days after harvest (DAH), following which fruit were then stored at 2°C until 209 DAH. Titratable acidity decreased more at 20°C than at 2°C until treatment. Flesh firmness changed little at eit

DAH, internal ethylene concentration (IEC) at 2°C remained lower at 20°C because IEC rose more rapidly at 20°C than 2°C. When fruit were stored from harvest until treatment, delaying treatment until 22 DAH had no effect on the efficacy of 1-MCP treatment. However, when fruit were stored at 20°C, the suppression of ripening by 1-MCP treatment decreased with increasing storage time. The results indicated that 'Fuji' apple fruit should be placed in cold storage immediately after harvest until 1-MCP treatment in order to maintain fruit quality during storage.

Key Words: [ethylene](#), [fruit quality](#), [storability](#)

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