

Title Measuring consumer response to ‘Gala’ apples treated with 1-methylcyclopropene (1-MCP)
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Citation Postharvest Biology and Technology, Volume 51, Issue 1, January 2009, Pages 73-79
Keywords Gala apples; *Malus sylvestris* L. (Mill.) var. *domestica* Borkh. Mansf.; 1-Methylcyclopropene; 1-MCP; Consumer taste tests

Abstract

Post-harvest apple treatment with 1-methylcyclopropene (1-MCP) was previously found to inhibit fruit ripening but also to inhibit the production of volatile compounds that contribute to apple flavor. The first objective of this study was to determine if consumers could distinguish 1-MCP treated and untreated Gala apples [*Malus sylvestris* L. (Mill.) var. *domestica* Borkh. Mansf.] following long-term storage. Chemical analysis showed 1-MCP treated fruit had reduced flavor volatiles compared to untreated fruit. Consumer difference tests showed they could distinguish between 1-MCP treated and untreated fruit. A second objective was to compare consumers’ acceptance for 1-MCP treated to untreated apples. Both 1-MCP treated and untreated apples received high overall liking scores that were not significantly different. Equal numbers of consumers indicated preference for 1-MCP treated and untreated fruit and there was no difference in purchase intent. However, subsets of consumers who eat Gala, Fuji or Red Delicious apples showed preference for untreated over 1-MCP treated fruit compared to consumers who do not eat these varieties.