

**Title** Preliminary results on the effect of postharvest 1-MCP treatments on some fruit quality characteristics of 'Gloster' and 'Cooper 900' during cold storage

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**Keyword** 1-MCP; cold storage; postharvest

### **Abstract**

The aim of this research conducted out 2008-2009 season is to determine the effect of postharvest 1-MCP applications on the some quality characteristics of Gloster and Cooper 900 apple cultivars during long term storage. For this reason fruits were harvested during commercial harvest period and then fruits free from mechanical damage and having high appearance quality were selected to use in this study. As soon as after harvest, 1-MCP treatments were done as gas form at two concentrations such as 0,625 and 1.250 ppm for 24 hours at 20°C temperature. Following treatments fruits were stored at 0±1°C and % 85-90 relative humidity conditions. Control fruits were stored without any treatment. In order to observe quality changes in the fruits during storage period, weight loss (%), soluble solids content (%), titratable acidity (g malic acid 100 ml<sup>-1</sup>), flesh firmness (N), superficial scald rate (%), superficial scald intensity (%), fruit skin color (CIE L a\*b\*), respiration rate (ml CO<sub>2</sub> kg<sup>-1</sup> h<sup>-1</sup>), ethylene production (nmol kg<sup>-1</sup> h<sup>-1</sup>), flavor and appearance were performed on fruits at monthly intervals. The experiment results showed that both concentrations of 1-MCP had positive effect on inhibition of weight loss, maintaining of flesh firmness and titratable acidity.