

Title Preliminary results on some constitutional changes in 1-MCP treated quince (*Cydonia oblonga* mill.) fruit during cold storage period

Author N.T. Gunes, E.S. Poyrazoglu and H. Dumanoglu

Citation ISHS Acta Horticulturae 858:229-234. 2010.

Keyword 5-caffeoyl quinic acid; fructose; malic acid; vitamin C

Abstract

This research summarizes effects of 1-methylcyclopropane (1-MCP) treatments on some compositional parameters in 'Esme' and 'Ekmek' quinces. Following harvest at the beginning of October, fruit were treated with 300 nl L⁻¹ and 1000 nl L⁻¹ 1-MCP, respectively, at 12°C for 20h and then stored at 0±1°C and 85-90% relative humidity for six months. During storage, contents of sugars, organic acids, phenols and vitamin C were determined in fruit sampled at monthly intervals and quantified based on external standards. Results showed that storage and 1-MCP treatment significantly affected the content of the compounds investigated in each cultivar. At the end of the storage period of six months, generally the treatment with 1000 nl L⁻¹ 1-MCP mostly inhibited loss of organic acid, phenolic compounds and vitamin C. While it seems that 1-MCP helps to retain quality from the standpoint of these compounds in both cultivars during storage, a clear effect on carbohydrates could not be observed.