

Title Analysis of physiological and biochemical changes in kiwifruit (*Actinidia deliciosa* cv. Allison) after the postharvest treatment with 1-Methylcyclopropene

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Abstract

Kiwifruits have limited shelf life under ambient conditions. However, it is necessary to extend its life so as to make it available for longer time in the market and to make it commercial fruits in India. Hence, the present study was designed to observe the effect of different concentrations of 1-Methylcyclopropene (1-MCP) on physiological and biochemical parameters which have great influence on post harvest life and quality of kiwifruits. Kiwifruits cv. Allison was treated with different concentrations of 1-Methylcyclopropene (0.5 $\mu\text{L/L}$, 1 $\mu\text{L/L}$, 2 $\mu\text{L/L}$) and un-treated fruits served as control. 1-MCP treatment was given for 24 h at 20°C. After treatments, the fruits were transferred to ambient storage, and observations on different physiological and biochemical parameters were recorded at 3 days interval. Our results indicated that all concentrations of 1-MCP delayed ripening of kiwifruits but 2 $\mu\text{L/L}$ concentrations was the most effective in doing so. Fruits treated with 1-MCP at 2 $\mu\text{L/L}$ started ripening after 12th day of storage whereas untreated fruits started ripening even on 6th day. Polygalactouronase (PG) and lipoxygenase (LOX) enzyme activities were lesser in 1-MCP treated fruits than control. 1-MCP treated fruits respired less and evolved lesser ethylene.

<http://www.springerlink.com/content/r1787j240t443676/fulltext.pdf>