

# 1-MCP microbubbles influence in fruit color and quality of dragon fruit

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## Abstract

The most important market characteristic of dragon fruit (*Hylocereus undatus*) is an intense and uniform peel color and green fruit bracts. Any alteration on the peel or bracts color will affect the shelf life and marketability of the fruit. 1-methylcyclopropene (1-MCP), an ethylene antagonist, is widely used to retain quality and extend commercial life of fresh produces. However, the application of 1-MCP in liquid form is still limited, this this research aimed to study the supply of 1-MCP using microbubbles technology (1-MCP-MBs) on external characteristics of dragon fruit. Dragon fruit was dipped for 10 minutes in 1500 ppb 1-MCP-MBs and then stored at 13 °C during 20 days. A control treatment was dipped into tap water for 10 minutes. Measures were taken every 4 days, and the results found that 1500 ppb 1-MCP-MBs treatment was effective in maintain greener bracts, as expressed by the significant higher hue values by day 20<sup>th</sup> of storage, when compared to the control. Also a better retard in L\* value changes was achieved when the fruit was treated with 1-MCP-MBs, maintaining similar figures during the 20 days of storage. However, weight loss was not influenced by any of the two treatments, Results support MBs technology viability, as an alternative to traditional applications of 1-MCP. Reducing exposure times, thus allowing a faster connection within the supply chain stages.