

**Title** Sapodilla (*Manilkara zapota* L.) maturation and conservation of submitted to postharvest treatment with 1-methylcyclopropene

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#### **Abstract**

The sapodilla is an exotic fruit adapted to edafo-climatic conditions from the Brazilian Northeast region in Brazil and show high potential for exportation; although, it is perishable and need technologies to increase its shelf-life. Considering what it has been said above, the aim of this work is to evaluate the use of ethylene action blocker (1-MCP) on sapodilla ripening control. The fruits were harvested at physiological maturation stage and treated with 100, 200 and 400  $\text{nl.L}^{-1}$  of 1-MCP by 12 hours into sealed chambers at  $25\pm 2^{\circ}\text{C}$  and  $70\pm 5\%$  relative humidity. After opening the chamber, the fruits were stored on the same conditions by 23 days. The analyzed parameters were: mass loss, external appearance, firmness, pulp colour, total titratable acidity, pH, total soluble solids (TSS), total soluble sugar (SS) and phenolic compounds. The experimental design was fully randomized with three replicates of four fruits each. There was a significant difference between the control fruits and those fruits treated with 1-MCP for the analyzed variables, excepting TSS, SS, pH and pulp chromaticity. Fruits which were treated with 1-MCP showed an increase of six days in shelf-life. The 200 and 400  $\text{nl.L}^{-1}$  dosages were more efficient than the 100  $\text{nl.L}^{-1}$  dose to delay the sapodilla firmness and pulp colour during ripening.