Title	Postharvest quality of 'Smooth Cayenne' pineapple treated with 1-Methylcyclopropene and cold shock
Author	Laesio Pereira Martins, Silvanda DE Melo Silva
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Abstract

Pineapple when submitted to low temperature suffers physiological and biochemical changes that result in loss of quality. The internal browning is an important physiological disorder of pineapple when stored at low temperature. The objective of this work was to evaluate the influence of cold shock (CS) and 1-methylcyclopropene (1- MCP) application on quality of 'Smooth Cayenne' pineapple, stored at l3°C and 23°C. Pineapples were harvested from a commercial plantation located at Sape municipality, Paraiba, Brazil. Fruits were harvested in the light green maturity stage were submitted to the following treatments: Control (Fruits without 1-MCP treatment); CS (Fruits exposed to cold chock at 5°C/12 hours); 1-MCP (Fruits treated with 150 μl.L^{-1} of 1-MCP/12h); 1-MCP +CS (Fruits treated with 150 μl.L^{-1} to 1-MCP/12h and exposed the 5°C/12h). Following the application of treatments, pineapples were stored at 13 ± 1 °C during 40 days and at 23 ± 2°C during 30 days. Fruits were evaluated at regular periods (0, 5, 10, 15, 20, 25, and 30 days) and fruits kept at 23°C, and for pineapples stored at 13 °C at 0, 5, 10, 15, 20, 25, 30, 40, and 45 days, for evaluations. It was evaluated physical, physical-chemical, enzymatic activity, sensorial analysis of appearance, and internal browning. According to the results, the application of 1-MCP (150 μl.L^{-1} /12h) associated to cold shock (5° C/12 h), promoted significant maintenance of quality of 'Smooth Cayenne' pineapple during 20 days at l3°C and 15 days at 23°C; The application of the 150 μl.L^{-1} of 1-MCP in 'Smooth Cayenne' pineapple was effective in retarding the maturity process, reducing the incidence of pulp internal browning, and incidence of symptoms of chilling injury at the skin, enhancing in 8 days the postharvest life of fruits stored at l3°C, and in 4 days at 23°C.