Title Effects of exogenous polyamine, salicylic acid and ascorbic acid on postharvest longevity and quality of cucumber fruits

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Abstract

Cucumber fruits are exclusively fresh consumed, and controlled atmosphere storage does not offer any benefits to cucumber quality. Thus, it was of great importance to investigate the physiological changes that occur in the fruit during storage under most usual conditions. Therefore, experiment was carried out to understand possible beneficial effect of some safe-ehemicals on shelf-life of cucumber fruits (*Cucumis satium* L.) cultivar Danito. Cucumber fruits harvested at commercial ripening stage were treated with putrescine, ascorbic acid and salicylic acid at concentration of 0 (control), 0.5 and 1 mM and stored at 20°C and 75% Relative humidity (RH) for 3 weeks. Control fruits softened rapidly to 20 N in 7th days and had considerable weight loss, but treated fruits with 1 mM chemical did not soften to a similar extent until after 18 days. The keeping quality for cucumber, defined as the time the color remains acceptable to the consumer, depends on the state of the chlorophyll metabolism. Both chlorophyll content and color value (a*) were supper in fruits treated by chemical, but it was higher in plant treated by salicylic acid than other treatments. Other fruit quality such as total soluble solid and acid content were higher in treated fruits the control.