Title Methyl jasmonate reduce chilling injury symptom and maintain postharvest quality of okra

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Abstract

Effect of 10^{-2} Methyl Jasmonate (MeJA) on physiological and biochemical changes in okra (*Abelmochus esculentus* L. *Moench*) kept at 4°C was investigated. We found that weight loss in MeJA treated okra was lower than non-treatment (control). The MeJA treated okra showed slightly changes of peel color expressed in L, a, b when compared with control treatment. Moreover, percentage of electrolyte leakage was also lower than non-treatment samples. MeJA treated okra had lower in the rate of respiration than untreated okra. Chilling injury (CI) score was determined by observing the chilling injury symptom of okra to evaluate the damage score. The result showed that MeJA untreated okra revealed 5% of CI symptom at 4 days of storage. Meanwhile, 10^{-2} M MeJA treated okra showed 5% of CI symptom at 6 days of storage. Activity of Lipoxygenase (LOX) and Malondialdehyde content were determined. LOX enzyme involved in senescence of membrane permeability and cell death. Malondialdehyde is an occurring product of lipid peroxidation. Okra treated with 10^{-2}M MeJA had lower LOX activity and malondialdehyde contents than MeJA non-treated okra. Ascorbic acid was also maintained at higher levels in MeJA treated okra. The MeJa treatment might be useful to alleviate chilling injury and maintain okra quality during cold storage.