Title	Effects of ethanol vapor treatment on the physiological responses and quality of fresh-cut eggplant
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Citation	Book of Abstracts, Southeast Asia Symposium Quality and Safety of Fresh and Fresh Cut Produce Greater Mekong Subregion Conference on Postharvest Quality Management in Chains, August 3-5, 2009, Radisson Hotel, Bangkok, Thailand.
Keyword	ethanol vapor; eggplant; fresh-cut

Abstract

Fresh-cut eggplants, as other vegetables, have relatively short shelf-life because of the large amount of tissue disruption and increased metabolism. There is a very rapid onset of enzymatic browning and tissue softening with consequent decrease in sensorial and nutritional quality. To reduce respiration and maintain fresh quality, various treatments have been applied to find the optimum conditions that provide more fresh and natural fresh-cut produce after minimal processing. The objective of this study was to investigate the effects of ethanol vapor treatment on physiological metabolism and quality of fresh-cut eggplant at 10°C during the extension of shelf life by exposure of intact eggplant to 5 ml kg^{-1} ethanol for 5 h.

The fresh-cut eggplant treated with ethanol vapor showed that respiration rate and occurrence of enzymatic browning were reduced, and higher total phenol content was maintained during 8 d of storage at 10°C. The polyphenol oxidase (PPO) and peroxidase (POD) in fresh-cut eggplant were also inhibited significantly by ethanol treatment. The ethanol treatment reduced the weight loss and maintained integrity of cell membrane confirmed by low value of electrolyte leakage. The ethanol vapor treatment applied to whole eggplant prior to processing for fresh-cut was practical approach to reduce activity of physiological metabolism and maintain the quality of fresh-cut eggplant. The experimental results revealed that treatment with ethanol vapor was effective for extending the shelf life of fresh-cut eggplant as a cheap, environmentally acceptable method.