Title Effect of nitric oxide on physiology of fresh cut lettuces and apples

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Abstract

Apple and lettuce slices fumigated with 500 µl/L NO for 2 hr or dipped in 500 mg/L DETA/NO for 5 min and objective measurements taken to examine their physiology. Apple slices had firmer flesh after treatment with NO gas or DETA/NO solution. DETA/NO was found to be more effective than NO gas in maintaining flesh firmness. NO gas treated apple slices were significantly firmer than untreated slices over the storage period, whilst the DETA/NO treated slices were firmer after 2 days storage. NO gas was also found to significantly reduce water loss in fresh cut lettuce and apple, but this effect was only maintained while NO gas was present. The DETA/NO treatment did not reduce water loss of fresh cut lettuce and apple. A significant reduction of respiration of was observed in fresh cut lettuce and apple slice fumigated with NO gas or dipped in DETA/NO solutions. The fresh cut lettuce and apple slices fumigated with NO gas significantly reduced the respiration rate after 1 and 5 days storage, respectively. While the respiration rates of the apple slices dipped in DETA/NO solutions significantly decreased after 3 days storage.