Title Use of nitric oxide to inhibit browning in fresh cut lettuce

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Abstract

Fresh cut lettuces have become an important market segment, but it is difficult to maintain quality during storage and marketing due to the high mechanical and physiological fragility and to browning of the cut surface, a major cause of loss of quality. Application of nitric oxide (NO) to lettuce slices by fumigation with NO gas or dipping in a DETA/NO solution has been found to inhibit the development of browning and extend postharvest life. The most effective treatments were lettuce slices fumigated with 500 µl/L NO for 1 h or dipped in 500 mg/L DETA/NO for 5 min. DETA/NO was found to be more effective than NO gas, with a 70% increase in postharvest life of lettuces fumigated with NO gas and 100% when dipped in DETA/NO relative to the respective control treatments.