

Title Effect of nitric oxide on browning and lignification of peeled bamboo shoots
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Abstract

The effects of nitric oxide (NO) on browning and lignification of bamboo shoots were investigated. Bamboo shoots were dipped for 1 h in 0.5 mM sodium nitroprusside (SNP), a nitric oxide donor, then packed in 0.01 mm thick polyethylene bags, and stored for 10 days at 10 °C. SNP treatment inhibited activities of PPO, POD and PAL and maintained high total phenol contents, thus delaying external browning during storage. Furthermore, SNP treatment showed a significant inhibition of the synthesis of lignin and cellulose and delayed tissue lignification, indicating that application of NO may be a promising method for extending shelf-life and maintaining quality of peeled bamboo shoots.