

Title Lignification of fresh-cut bamboo under low O₂ conditions
Authors P. Kakaew, C. Jirapong, C. Wongs-Aree
Citation ISHS Acta Horticulturae . 804:493-498 2008.
Keywords *Dendrocalamus asper* Backer, minimal processing, browning, darkening, lignin, phenolics

Abstract

Bamboo is not only used for home decorations, but for food compositions of many recipes in East-Asian countries. Ready-to-cook bamboo is immensely favour in retail markets but the fresh-cut turned yellow, brown, and hard texture quickly. In this study, lignin accumulation and quality of fresh-cut bamboo were investigated under consistent low O₂ of 10 and 5% (N₂ balanced), compared to normal air (21% O₂) at 10°C and 95% RH. Peroxidase activities (POD) of all treatments highly increased after storage that the rates of increase were lower in bamboo slices under low O₂ atmosphere. Lignins combined with phloroglucinol-HCl obviously located in secondary spiral cell walls of tracheids in vascular bundles. Although L values were no significant differences between treatments, fresh-cut bamboo expressed progressive yellow on the cut surface during storage. Oxygen at 5% in storage atmosphere was best in retardant of the colour changes.