

1-MCP处理对脱壳茭白木纤化与细胞结构的影响 Effect of 1-methylcyclopropene (1-MCP) on Lignification and Cell Ultrastructure of Peeled Water Bamboo Shoot

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关键词: 茭白 1-MCP 木纤化 超微结构

摘要: 研究了不同体积分数1-MCP处理对常温和低温贮藏期间脱壳茭白木纤化以及细胞超微结构的影响。研究发现: 0.5 μ L/L的1-MCP处理可较好保持常温和低温条件下茭肉的外观品质, 抑制乙烯的产生, 减少纤维素含量的增加, 抑制可溶性果胶含量的下降和原果胶含量的增加, 减轻茭肉木纤化过程。用透射电镜观察常温贮藏6d后的茭肉超微结构, 发现1-MCP处理的细胞较对照细胞内含物丰富, 胞间连丝仍然清晰, 证实了1-MCP处理可延缓脱壳茭白的衰老过程。 The effect of 1-MCP treatments on lignification and cell ultrastructure of peeled water bamboo shoot was investigated under the storage conditions of normal and low temperature. The results indicated that 0.5 μ L/L of 1-MCP treatment could keep good sensory quality and inhibit the ethylene production rate. It could also markedly reduce the increase of cellulose content, the decrease of water soluble pectin content, and the increase of protopectin content, and inhibit the lignification of peeled water bamboo shoot. Transmission electron microscope was used to observe the ultrastructure of peeled water bamboo under the storage conditions of normal temperature. The results showed that the cell inclusions of peeled water bamboo shoot treated with 1-MCP were rich and the degradation of plasmodesma was inhibited compared with the control, which further indicated the inhibition of 1-MCP on lignification of peeled water bamboo shoot.

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