

Abstract:

The anthocyanin content, polyphenol oxidase and the pH values in lychee (*Litchi chinensis* Sonn.) pericarp were determined over a period of 5 days at 25 °C and 65% RH. The acidity in lychee pericarp decreased from a pH of 4.3 to 5.3, at the end of the 5-day period. The anthocyanin content decreased drastically during the first three days and stayed at the same level after the third day. Similarly, the visual appearance of the lychee pericarp turned from a uniform redness to a complete brownish after the third day of storage. Polyphenol oxidase in the pericarp was active when the pH was between 4.1 and 4.6, and became less active when the pH was above 4.6. The PPO activity was at 160 units per mL of extract in the beginning and dropped to 80 units per mL of extract on the 3rd day of storage. Our study revealed that the red color of lychee pericarp disappeared much faster than the degradation of anthocyanins. The significant decrease of PPO activity in pericarp during the first day of storage was not enough to stop the pericarp brown-ing.