

Abstract

Freshly harvested spears of 'Atlas' white asparagus (*Asparagus officinalis* L.) were heated by immersion in water at 50, 52.5 or 55 °C for 5–25, 2.5–12.5 and 1–5 min, respectively. Spears were then stored for 6 days at 2.5 °C and for 1 more day at 25 °C. The tips of the untreated spears had an intense violet color, due to an appreciable anthocyanin synthesis and additionally they were yellow and darker, making the spears unacceptable. Heat treatments at 50 °C for 10–25 min, 52.5 °C for 7.5–12.5 min and 55 °C for 1–5 min inhibited postharvest anthocyanin synthesis in spears stored for 6 days at 2.5 °C, even after the spears had been transferred for 1 more day at 25 °C and the initial white spear color was retained. However, heat-treated spears at 50 °C for 10–25 min, at 52.5 °C for 7.5–12.5 min and at 55 °C for 4–5 min showed 'clamminess'. Therefore, the most effective treatment to inhibit anthocyanin synthesis and to avoid loss of spear appearance was a heat treatment at 55 °C for 3 or 2 min.