

#### Abstract:

Peel colour is an important component of consumer acceptance of apples (*Malus x domestica*). We examined the effects of postharvest temperature on the postharvest development of peel colour. 'Rome' apples were bagged in the orchard during the growing season to obtain physiological mature but anthocyanin-free fruit. Postclimacteric bagged fruit were harvested, and exposed to a range of postharvest temperatures (-2, 0, 5, 10, 15, 20, 25, 30 and 35 °C). All fruit received the same continuous quantity and quality of cool-white fluorescent light ( $15 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ ) to simulate anthocyanin production. Colour development was recorded every 2 days and ethylene production measured periodically during storage. Colour was correlated to anthocyanin production. The results showed that temperature is a very important component of colour development in apples. Optimal colour development occurred at 20-25 °C, whilst at lower temperatures, colour development was significantly slowed. At higher storage temperatures (30 °C) anthocyanin accumulation was retarded, whilst at 35 °C, anthocyanin accumulation was completely prevented.