

Abstract:

Plum is one of the important stone fruit crops of Western Australia and contribute about 60% Australian plum export (ABS, 2003). Postharvest softening is a major factor, limiting the shipping, storage and shelf life of climacteric fruits including plums (Skog et al., 2003). Ethylene plays an important role in the stimulation of fruit senescence and softening (Menniti et al., 2004). Inhibition and suppression of C₂H₄ action during storage and ripening delays the softening of many climacteric fruits (Liguori et al. 2004; Singh et al., 2003). Postharvest application of 1-MCP has been reported to reduce and inhibit the ethylene production, softening and colour changes in plums and the response varied depending on cultivar, harvest maturity and rate of 1-MCP applied (Martinez-Romero et al., 2003a; Salvador et al., 2003; Valero et al., 2003). The present study aims to investigate the effect of 1-MCP on ethylene biosynthesis and fruit softening during cold storage and ripening in the late maturing 'Tegan Blue' plum.