

Influence of aqueous hexanal on quality of 'Royal Delicious' apple during cold storage

Ziaullah Sulaimankhil, Shruti Sethi, R. R. Sharma, M. K. Verma, Anil Dahuja and Arpan Bhowmik

Acta Physiologiae Plantarum 43: 134. (2021)

Abstract

The objective of the present study was to evaluate the effectiveness of aqueous hexanal in prolonging the storage life of apple cv. 'Royal Delicious' while maintaining its quality. The influence of different concentrations of aqueous hexanal (1 mM, 2 mM and 3 mM) as a dip treatment for 2, 3 and 4 min was tested. Fruits given no hexanal treatment were taken as control. The treated and control apple fruits were stored under 1–2 °C and 80–90% RH for a period of 90 days and evaluated for physical and biochemical changes at regular interval of 15 days. The current study demonstrated that exogenous application of 1 mM hexanal applied as dip treatment for 3 min soaking time given to 'Royal Delicious' apple fruits retained higher firmness, reduced decay and improved the overall quality of the fruits upto 3-month storage under 1–2 °C. To conclude, postharvest application of aqueous hexanal as dip treatment holds promise in prolonging postharvest storage life and preserving quality of apple cv. 'Royal Delicious'.