

Title Effect of ethephon and ethylene gas on ripening and quality of detached winter tomato
Author R.K. Dhall, B.V.C. Mahajan and A.S. Dhatt
Citation Abstracts Book, 6th International Postharvest symposium, 8-12 April 2009, Antalya, Turkey.
256 pages.
Keyword Tomato; ethylene; ripening

Abstract

Fruits of winter tomato (*Lycopersicon esculentum* L.) hybrid were harvested at mature green stage and first lot was exposed to ethylene gas (100 ppm) for 24 hr in ripening chamber at $20\pm 1^{\circ}\text{C}$ and the second lot was treated by immersion in a solution of ethephon {(2-chloroethyl) phosphonic acid} at 2 different concentrations (500 and 1000 ppm) and for two different lengths of times (5 and 10 min). The fruits were air dried and placed in plastic crates followed by storage in ripening chamber at $20\pm 1^{\circ}\text{C}$ and 90-95% RH. The colour, texture and flavour parameters of fruits from mature green to senescent stage of maturation were analyzed. The most striking effect of treatment was on colour development of fruits. It was found that treatment with ethylene gas (100ppm) for 24 hr inside ripening chamber or immersion in ethephon solution (500 ppm) resulted in better ripening of tomato fruits with uniform red colour, desirable quality as compared to other treatments. The length of time of ethephon dip treatment did not reveal any significant effect on colour development. The fruits in control showed very poor ripening and were hard in texture with poor quality attributes.