

Title Effect of shrink wrapping on shelf life and quality of cucumber during different storage conditions

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Abstract

Immature green cucumber (cv. Padmini) fruits were individually shrink wrapped with Cryovac D955 (60 guage) film & stored at $12\pm 1^{\circ}\text{C}$, 90-95% RH as well as ambient conditions ($29-33^{\circ}\text{C}$, 65-70% RH). At $12\pm 1^{\circ}\text{C}$ and 90-95% RH, individual shrink wrapped cucumber recorded minimum PLW (0.66%) as compared with unwrapped fruits (11.11 %) at the end of refrigerated storage (15 days). The loss of firmness was maximum (1304.6-876.6) in unwrapped cucumbers whereas in shrink wrapping, minimum loss in firmness (1304.6-1065.3) was observed after 12 days storage at $12\pm 1^{\circ}\text{C}$ & 90-95% RH but greater loss of weight & firmness makes the control cucumbers unmarketable after 9 days of storage. There were no rotting at all both in shrink wrapped & unwrapped cucumbers upto 15 days of storage at $12\pm 1^{\circ}\text{C}$ and 90-95% RH. After 15 days storage of shrink wrapped cucumbers at $12\pm 1^{\circ}\text{C}$ & 90-95% RH, there was loss of green colour and development of yellowness & decay. The sensory attributes score was highest in shrink wrapped cucumbers as compared to unwrapped cucumbers at end of both storage conditions. Thus it can be concluded that individual shrink wrapped (60 guage) cucumber can be stored well upto 15 days at $12\pm 1^{\circ}\text{C}$ & 90-95% RH and for 5 days at ambient conditions ($29-33^{\circ}\text{C}$, 65-70% RH) with maximum retention of green colour, no spoilage, minimum weight & firmness loss & very good sensory quality attributes whereas, unwrapped fruits can be stored well upto 9 days at $12\pm 1^{\circ}\text{C}$ & 90-95% RH & for 2 days at ambient conditions with maximum retention of physico-chemical quality attributes.