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Effect of Edible Coating (Aloe Vera and Alginate Blend) Treatment on Postharvest Quality of Bell Pepper (*Capsicum annuum* L.)

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Abstract—*The present research work was envisaged to study the effect of postharvest treatment with aloe-vera and sodium alginate on physiochemical and organoleptic properties of bell pepper (Capsicum annuum L.) at two different storage temperatures i.e., 10 and 25°C. Results indicated that bell pepper stored at 10°C have better postharvest quality than stored at 25°C. Sodium alginate coated sample after 28 days at 10ºC showed lowest physiological weight loss of 4.90±0.65 % and retention of maximum ascorbic acid content (57.30±0.30 mg*100^{-1} g). Sodium Alginate coated samples had minimum increment in TSS (6.07±0.08 %) and reducing sugar content increased slowly from 1.10±0.23 to 2.63±0.14 mg in a period of 28 days at 10ºC and maintained tissue firmness (153.20±0.26 g). In terms of antioxidant activity, aloe-vera coated samples have retained maximum antioxidant activity (24.58±0.48 % DPPH inhibition) after 28 days at 10ºC. Sodium alginate coated bell pepper showed maximum color and flavor retention and overall acceptability after 21 days of storage at storage temperature of 10ºC. In general, Coating with sodium alginate was effective over a storage period of 28 days whereas aloe-vera treatment was quite effective especially in terms of retaining antioxidant property and maintaining pH at a storage temperature of 10ºC for 21 days.*

Keywords*: bell pepper, aloe-vera coating, sodium alginate coating, physiochemical analysis, sensory evaluation.*

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