Title Gum arabic as a novel edible coating for enhancing shelf-life and improving postharvest quality of tomato (*Solanum lycopersicum* L.) fruit

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Abstract

Coating of tomato fruit with gum arabic has been found to enhance their shelf-life and postharvest quality. Gum arabic in aqueous solutions of 5, 10, 15 and 20% was applied as a novel edible coating to green-mature tomatoes which were stored at 20 °C and 80–90% RH for 20 d. Fruit coated with 10% gum arabic showed a significant ($P \leq 0.05$) delay in changes of weight, firmness, titratable acidity, soluble solids concentration, ascorbic acid content, decay percentage and colour development compared to uncoated control fruit. Sensory evaluation proved the efficacy of 10% gum arabic coating by maintaining the overall quality of tomato fruit during the storage period. The results suggest that by using 10% gum arabic as an edible coating, the ripening process can be delayed and the storage life of tomatoes stored at 20 °C and at the breaker stage can be extended up to 20 d without any spoilage and off-flavour.