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Application of *Hibiscus rosasinensis* L. Leaf Mucilage with Gelatin as an Edible Coating to Extend the Shelf life of *Psidium guajava* L.

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Guava is one of the most common fruits grown under tropical and sub-tropical climate. The fruits are susceptible to spoilage due to perishability. Application of edible coating is a cost-effective and environmentally friendly technology used to extend the shelf life by retarding perishability and increase the consumer acceptability. The present study was conducted to investigate the effect of gelatin with *Hibiscus rosasinensis* leaf mucilage as an edible coating on the quality and shelf life of guava fruits during storage. Freshly harvested, uniform sized, undamaged, mature guava (var. *Bangkok Giant*) fruits were dipped in leaf mucilage and with different concentrations of 1, 3, 5 and 7% (w/v) of gelatin solutions for 20 min. Then, the fruits were air-dried and stored at the cold storage temperature of 15°C and room temperature of 30°C. Physico-chemical parameters such as ascorbic acid, total sugar, total soluble solids and titratable acidity (as citric acid) were determined at 3 days intervals. Ascorbic acid content decreased from 28.7mg/100g during storage but degradation was slow under cold storage temperature of 15°C. The fruits coated with 5% of gelatin and stored at 15°C showed the highest retention of ascorbic acid, total sugar, total soluble solids and titratable acidity with the values of 28.66 mg%, 8.49%, 12.3°Brix and 0.69%, respectively. According to the sensory evaluation and shelf life studies, the guava fruits coated with *Hibiscus rosasinensis* leaf mucilage with 5% gelatin could be stored for 28 days at 15°C without any significant losses in the quality characteristics.

Key words: *Gelatin, guava, Hibiscus rosasinensis*, *nutritional quality, shelf life*

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