

## DEVELOPMENT OF PUMPKIN (*Cucurbita maxima*) AND PINEAPPLE (*Ananas comosus*) INCORPORATED FRUIT LEATHER

P.M.G.C.B. Wijerathna<sup>1</sup>, D.N. Hettiarachchi<sup>2</sup>, C.A.K. Dissanayake<sup>1</sup>,  
D.L.C.N. Hitigedara<sup>2</sup>, D.K. Jayarathna<sup>2</sup>, A.W.T.U. Dharmathilake<sup>2</sup>, S.M.K.  
Rathnayake<sup>2</sup>, R.A. Wijerathna<sup>2</sup>, K.S.S. Wimalasiri<sup>1</sup>, A.G.S.N. Abeykoon<sup>1</sup>

<sup>1</sup>*Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura.*

<sup>2</sup>*Food Research Unit, Department of Agriculture, Gannoruwa, Peradeniya*

Fruit leathers are dehydrated sheets of pulp of fruits/vegetables, which have high nutritive value and organoleptic properties. In this study, leather was developed by mixing pumpkin and pineapple. Initially, the best ratio of pumpkin and pineapple was identified from 4 treatments (T1-100% pumpkin, T2-75% pumpkin & 25% pineapple, T3-50% pumpkin & 50% pineapple, T4-25% pumpkin & 75% pineapple) through a sensory evaluation. Fresh pumpkin and pineapple pulp were mixed according to the ratio with other ingredients (sugar, citric acid, pectin, SMS) and heated while stirring at 80°C for 15 min. Then the mixture was poured into a tray and dried in a conventional dryer at 55°C for 12-14 hours to set the leather. Sensory evaluation revealed that T2 was best according to the superiority of organoleptic characteristics. The selected leather was initially tested for nutrient quality, physicochemical properties, phytochemical properties and microbial quality. It (T2) was then tested for keeping quality by storing for 28 days in two packaging materials (Poly Propylene (gauge 300) and polyethylene/aluminum/polypropylene triple laminated packages) at ambient temperature. Initially, the selected leather recorded 16.1% moisture content, 30.5 °brix total soluble solids, YOG 22 A-B colour, 3.67 pH, 1.56% titratable acidity and 30.85±0.692 mgg<sup>-1</sup> ascorbic acid, 73.53mg (GAE)100g<sup>-1</sup> total phenolic content and 6.89 mM100g<sup>-1</sup> of antioxidant activity (DPPH assay). Initial microbial content was under safe levels. Moisture content had significantly decreased ( $p<0.05$ ) during storage in the leather packed in polypropylene. In both packaging types, pH values, antioxidant activity and ascorbic acid content in leathers had decreased, while total soluble solids and titratable acidity had increased ( $p<0.05$ ). Total phenolic content had not significantly ( $p>0.05$ ) changed in both packaging. The leather packed in polypropylene showed the highest loss of ascorbic acid. Microbial content increased ( $p<0.05$ ) during storage, but under safe levels. Therefore, leather can be successfully developed by incorporating 75% pumpkin and 25% pineapple.

**Keywords:** Fruit leather, Nutrient value, Physicochemical properties, Phytochemical properties, Storage study