

Preparation and Quality Evaluation of Soursop (*Annona muricata* L.) Jelly without Preservatives

G.G.A. Shashikala and T. Mahendran

*Department of Agricultural Chemistry, Eastern University, Chenkalady (E.P.),
Sri Lanka*

Soursop fruit has a great potential to ensure food security, nutrition and income generation. The fruit has been used as a natural medicinal remedy for many years worldwide and it has a broad range of therapeutic effects, including antibacterial, antitumor, analgesic, hypotensive, anti-inflammatory and immune enhancing properties. Therefore, nowadays most food processing industries move to preparation of various value added products using soursop fruits. Fruit jelly is a semi-solid gelled made from the juice, mixed with acids, pectin and sweetening agents. This study was focused to develop a soursop jelly and to assess its sensory qualities, physico-chemical properties and storage stability. Soursop jelly was prepared according to Sri Lankan Standard Specification of a general recipe for fruit jelly. Physico-chemical characteristics, organoleptic qualities and microbial studies were carried out following different formulation of jellies. Total plate count was carried out for microbial studies and seven points hedonic scale was used to assess the sensory attributes. The nutritional analysis of the freshly made jelly revealed that the titratable acidity, TSS and total sugar increased from 0.32 to 0.52%, 5.1 to 21.17 (°Brix) and 40.58 to 82.4% while the moisture and pH decreased from 36.4 to 22.21% and 4.33 to 3.85, respectively, with increase in soursop pulp concentration from 20 to 100%. According to Tukey's test, the mean scores for the assessed sensory characters varied significantly in the freshly made jelly ($p < 0.05$) and the highest overall acceptability was recorded with 80% soursop pulp concentration. No total plate count was observed in all formulated jellies. Based on the results, the jelly made with 80% soursop pulp was selected as best formulation and could be stored at 30°C and 80-90% RH for 12 weeks without any significant changes in the quality attributes. In conclusion, preparing jelly is an ideal way of adding value to the underutilized soursop fruit.

Keywords: Fruit jelly, Physico-chemical parameters, Sensory evaluation, Soursop