Development of Soursop (*Annona muricata* L.) Jam and Evaluation of its Quality Parameters

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Soursop (*Annona muricata* L.) is a highly perishable underutilized fruit which is susceptible to postharvest losses. Postharvest losses can be minimized by processing the fruits into value-added products. Jam is a product with a process of combining fruit pulp, sugar, pectin and citric acid. This study aimed to develop a Soursop jam and assess its sensory, proximate and physicochemical properties. Soursop jam was produced by using a general recipe according to the Sri Lankan standard specification for jams, jellies and marmalades. Sensory attributes were evaluated during the storage time of two months using nine point hedonic scale. Proximate analysis was conducted for the final product. Total plate count and yeast and mold count were analyzed throughout the storage period at room temperature. Total soluble solids, titratable acidity, pH and ascorbic acid content were determined during the storage period. MINITAB 17 statistical software was used for data analysis. Sensory data were analyzed using Kruskal-Wallis test and physicochemical data were analyzed by one way ANOVA test with 95% confidence level. Only texture of Soursop jam was significantly changed ($P<0.05$) during the storage period. Proximate analysis revealed that Soursop jam contains carbohydrate (69.58%), moisture (29.46%), ash (0.4%), crude protein (0.29%) and fat (0.27%). Total plate count and yeast and mold counts were less than the standard maximum limits. Physicochemical results revealed that total soluble solids, titratable acidity and pH were not significantly changed ($P>0.05$) during the storage period while ascorbic acid content significantly decreased ($P<0.05$). In conclusion, Soursop jam is a better option for value addition to the Soursop fruit while minimizing postharvest losses.

Key words: Fruit jam, Quality parameters, Perishable, Soursop, Value-added product