
Formulation of an antioxidant rich beverage using soursop (*Annona muricata L.*) blended with ginger (*Zingiber Officinale*) extract

G.W.S. Madurangi and K.D.P.P. Gunathilake*

*Department of Food Science and Technology, Faculty of Livestock, Fisheries and Nutrition,
Wayamba University of Sri Lanka, Makandura, Gonawila (NWP), Sri Lanka*

The present study mainly focused on producing an antioxidant rich beverage from soursop (*Annona muricata L.*) blended with Ginger (*Zingiber officinale*) and studying its storage stability at ambient (28°C) temperatures. For the formulation, ginger extract was blended with soursop juice at the ratio of 1%, 3%, 5%, 7% and 10% levels (v/v). Sensory evaluation was carried out by a panel of 25 semi-trained panelists, using 9-point-hedonic-scale to select the best level of ginger. Physico-chemical and antioxidant properties of soursop pulp, ginger extract and final product were evaluated. Changes in physicochemical, microbiological quality and antioxidant activity of the blended beverage were analyzed at weekly intervals. Protein, fat, fiber ADF, ash, carbohydrate, moisture content of soursop pulp were 0.26%, 0.85%, 0.36%, 8.9%, 13.83% and 82.8% respectively. Results showed that soursop juice blended with 10% ginger extract was obtained significantly ($p < 0.05$) highest sensory scores together with highest level of antioxidants comparatively. The antioxidant capacity in 10% ginger extract blended beverage was found as 6593.1 mg AA/g (FW) while soursop pulp, and ginger extract has got 8132 mg AA/g (FW), 3142.6 mg AA/g (FW) values respectively. Total phenolic content of soursop pulp, ginger extract and final beverage were 144.9 mg GAE/1g, 157.35 mg GAE/1g and 169.71 mg GAE/1 g respectively. The physicochemical properties of the final beverage were found as follows; pH, acidity, and TSS of the final beverage were 3.7, 0.6 g/100ml (citric acid equivalents), and 12° respectively. The formulated beverage was found to be microbiologically safe for consumption. Results showed that the minimum shelf life of the final product was 8 weeks at 28°C.

Key words: Soursop, Ginger, Antioxidant, blended beverage, Total phenolic content

* kdppgunathilake@yahoo.com