Physicochemical Characteristics of Peanut Butter Fruit *(Bunchosia armenica)* And Possible Application in Food Industry

G.A.D.V.Karunasena[1], S.B.Nawarathne[1*] and V.G.G.Chandrajith[2*]

[1]*Department of Food Science and Technology, University of Sri Jayewardenepura, Nugegoda, Sri Lanka*

Bunchosia armenica or Peanut butter fruit being a member of family Malpighiaceae is a native plant to America. Peanut butter fruits are edible and used for different purposes including medicament. This study was carried out to determine the physicochemical properties of the pulp of the peanut butter fruit and incorporation of it to the food chain as sauce. The proximate composition (moisture, dry matter, crude fiber, crude fat, total ash, minerals and carbohydrates) of flesh of peanut butter fruit were determined by using Association of Analytical Communities (AOAC) methods and pH, titratable acidity, total soluble solids and ascorbic acid were also analyzed. The colour and texture variation of flesh of fruit in six maturity stages were determined. Further the Total Phenolic Content (TPC), antioxidant capacity (free radical 2, 2- diphenyl- 1-picrylhydrazyl (DPPH) method) and reducing power were also analyzed. Percentage of moisture and dry matter content of peanut butter fruit were 74.17% and 25.82% respectively. Crude protein, crude fat, crude fiber, ash and carbohydrates content in 100g of dry matter were 0.32, 3.35, 45.29, 0.87 and 50.16 g respectively. Potassium was the most abundant mineral in flesh of peanut butter fruit, followed by Na, K, Mg, Ca, Zn, Fe and As. Vitamin C content of peanut butter fruit was 9.43±0.13 mg/100 ml. Total polyphenol content of flesh of peanut butter fruit was obtained as a mean of 33.27mg Gallic acid equivalents per L of fruit extract. In DPPH radical scavenging assay, the IC50 value in peanut butter fruit variety was obtained as 13.443±0.29mg/ml. From the sensory evaluation, sauce with medium sugar content obtained the highest average rank for overall acceptability.

Keywords: Peanut butter fruit, Sauce, Physicochemical