

Development of a Carbonated Guyabano Juice

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Abstract

Soda is said to have “empty calories.” Thus, a healthier carbonated beverage was produced using guyabano, which is rich in vitamins, minerals, and flavonoids. Guyabano syrup was prepared with sugar, water, guyabano juice, and calamansi juice. To optimize the final product, guyabano syrup was mixed with carbonated water in three ratios, namely, 2:17, 3:17, and 4:17. From a preference ranking test, formulations with 3:17 and 4:17 ratio were not significantly different, but the latter was chosen for the succeeding tests based on its low rank sum. A consumer acceptability test showed that panelists “moderately liked” the appearance, taste, and sweetness of the product. On the other hand, aroma, carbonation, and the overall acceptability were “liked very much.” Physicochemical properties of guyabano juice, guyabano syrup, and carbonated guyabano juice were determined. The pure guyabano juice had 4.21 pH, 0.94% malic acid, and 15 °Bx while the guyabano syrup had a pH of 3.97, 0.69% malic acid, and 46.26 °Bx. The pH, TTA (total titratable acidity), and TSS (total soluble solids) of the finished product were 3.80, 0.21%, and 10.37 °Bx, respectively. An antioxidant capacity assay showed that the carbonated guyabano juice had 0.131 mg ascorbic acid equivalent-mL⁻¹. There was no significant change in pH and TTA after one week storage at ambient temperature. However, yeast and mold count significantly increased and TSS significantly decreased. Thus, it is recommended that the developed carbonated guyabano juice be stored at refrigerated temperature or added with a suitable preservative.