

ABSTRACT

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DEVELOPMENT AND MARKET POTENTIAL ANALYSIS OF BILIMBI FRUIT (*Averrhoa bilimbi* L.) SORBET

(xvi + 90 pages: 35 figures, 10 tables, and 19 appendices)

Bilimbi fruit is one of Indonesia's native plants which contains great health benefits. It is a good source of vitamins and antioxidants. Consumption of bilimbi fruit is low due to its extreme sour taste. New product development to promote consumption of bilimbi fruit such as sorbet can be done. Sugar as sweetener in bilimbi fruit sorbet can be substituted with stevia to increase its health value without decreasing its sweetness. This research was done in three stages. In the first stage, effect of the ratio of fruit juice to solids and ratio of sugar to stevia were analyzed to determine the best formula. In the second stage, effect of storage time towards the characteristics of sorbet such as pH, total soluble solids, melting time, and vitamin C content were analyzed. In the third stage, market potential analysis was conducted through market survey and market testing. The chosen formula was selected based on hedonic test in terms of color, flavor, texture, aftertaste, and overall acceptance. Sorbet with ratio of fruit juice to solids 1:0 and ratio of sugar to stevia 0:1 was selected as the chosen formula. The chosen formula had an IC₅₀ value for radical scavenging activity of 3.35% and contained 0.11 mg/ml of vitamin C. Nutritional content of the chosen formula consisted of 97.88% moisture, 0.01% ash, 0% fat, 0% protein, and 2.1% carbohydrate. Effect of storage time towards sorbet were the incline in pH, increase in total soluble solids, increase in melting time, and decrease in vitamin C content. Market target for this product is for upper-middle class women with a healthy lifestyle. This product had a small market potential if it was to be marketed as common frozen dessert. However, it has a great potential as a dessert with health benefits.

Keyword : Bilimbi fruit, market potential analysis, sorbet, stevia

References : 85 (1995-2016)