

Development of a naturally flavored ready to serve (RTS) fruit beverage

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Abstract

Fruit based beverages are one of the foremost categories of beverages that are consumed globally. Since fruit beverages are easily digestible, health conscious, highly refreshing, thirst quenching, appetizing and nutritionally far superior to most of the synthetic beverages available in the market, consumption of fruit based beverages have been increased dramatically. Natural extracts of tropical fruits such as *Carica papaya* (papaya), *Passiflora edulis* (passion fruit), and natural flavor extract of *Camellia sinensis* (leaves) and *Cinnamomum verum* (Cinnamon barks) were extracted and used as the main ingredients of this product while sugar, Citric acid, pectin were used as the supplementary ingredients. The best fruit pulp ratio and the best natural flavoring agent out of tea and cinnamon was determined through structured sensory evaluations by participating 30 semi trained panelists. Further experiments were also performed to find the optimum amount of pectin to reduce hard packing and to determine the shelf life of the developed beverage and to develop the natural pectin extraction method by using unutilized parts of the *Passiflora edulis* fruit. Proximate analysis studies and microbiological studies were also carried out. Collected data were statistically analyzed using Kruskal-Wallis non parametric analysis and sample 293 which is containing 15% total fruit pulp with papaya to passion fruit ratio 2:1 and cinnamon as the flavoring agents was the best product formulae. According to the proximate analysis data, fat, protein, carbohydrates, fiber and the ash content were 0.41%, 0.11%, 13.13%, 0.052%, 3.028% and 83.27% respectively. The total plate count was 12 cfu/ml and yeast and molds were 0 cfu/ml of the product and Physico-chemical studies reveals that, the product can be preserved for 30 days under 4 ± 1 °C condition. The average pectin percentage of *Passiflora edulis* and *Carica papaya* were 6.9 % and 4.5 % respectively.

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