PRESERVATION OF A READY TO SERVE FRUIT DRINK WITHOUT USING PRESERVATIVES

By

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Abstract

The fruits of mango, pineapple, papaya and oranges occupy a prominent position among the fruit crops grown in Sri Lanka, providing essential minerals and vitamins in the human diet. Moreover, the ripe fruits are priced for its excellent taste and medicinal properties. However, marketing of fresh fruits are a great problem because of its short postharvest life, which leads to high post harvest losses of 30-40%. Several conservation techniques have been used to preserve fresh fruits and development of ready to serve fruit drinks has been found to be effective method. However, the prevailing preservation methods for Ready to serve fruit drinks are based on chemical preservatives, which are reported as health hazardous. Hence the research was conducted to develop methodology for preparation of ready to serve fruit drinks without using chemical preservatives.

Preliminary experiment was conducted to find the suitable time temperature combination for preservation of ready to serve fruit drink. As treatments, pasteurization at 95^{0}C for 5 minutes,100^{0}C for 30 seconds, 100^{0}C for 5minutes and 100^{0}C for 15 minutes were prepared. The control treatment was prepared with using preservatives and the effectiveness of the treatments was determined by measuring the physico-chemical, microbiological and organoleptic properties in one-week interval for one month. Main experiment was conducted to determine the shelflife of developed product with comparison to chemically preserved control sample. Based on

the physico-chemical, microbiological and organoleptic properties, the shelflife of the developed product was determined.

The change of physico-chemical, microbiological and organoleptic properties of the ready to serve fruit drinks prepared by pasteurizing at 95 ^{0}C for 5 minutes, and control treatment showed similar pattern with the storage period and not significant each other. The results revealed that the ready to serve fruit drink prepared by pasteurization at 95 ^{0}C for 5 minutes can be preserved without using chemical preservatives for three months.

Table of content

CHAPTER 03

3. Materials and methodology

CHAPTER 4