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Development and biochemical assessment of Coconut Sap beverage

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Fresh coconut sap is a sweet, oyster-white, translucent juice which is rich in nutritive value. This study was conducted to develop a ready to serve (RTS), non-alcoholic beverage which is rich in nutritive value, vitamins and minerals and increases the diversification of coconut sap products. Fresh coconut sap was filtered to remove hal bark and inflorescence debris and boiled at 100 °C for one hour until the brix value reached 18°-20°. Then the supernatant was filtered with the removal of the sediment. The solution was standardized to 15° brix by mixing with boiled water, ginger and pineapple flavours (water extracted juice). The resulting RTSs' were hot-filled into glass bottles and sterilized in boiling water for 20 minutes. Finally it was cooled and stored at room temperature (27 °C). Sensory evaluation was carried out using the simple ranking test (5-point hedonic scale) to determine the preference among three types of RTSs'. Further chemical assessments of the RTSs' were performed and microbial analysis was also carried out by repeating each experiment thrice. Results of sensory evaluation showed that ginger and pineapple flavoured RTSs' had gained a higher preference than non-flavoured RTS with good taste and overall acceptability. The composition of RTSs' showed a zero alcohol content and higher levels of minerals, especially potassium and sodium. Further, average pH of the RTSs' was 5.2 and there was a reduction in percentage acidity level with storage time. This may be due to the declining of ascorbic acid content. Accordingly, total microbial and yeast and mold colony proliferation showed a gradual increase but not beyond the accepted level. The study concludes that fresh sap of coconut can be utilized in preparing non alcoholic, flavoured, nutritious, and ready to serve beverages.

Key words: - Coconut sap, RTS, non-alcoholic, flavoured, nutritious

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