

Development and Storage Studies of Aloe Vera-Sour Orange Based Functional RTS Drink Flavored with Ginger

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Aloe Vera is well known worldwide for its functional and therapeutic potential. Aloe Vera gel of the leaf contains several biologically active compounds including vitamins, polysaccharides, amino acids, phytosterols, quinones and saponins. These biological activities include promotion of wound healing, immunomodulatory, antifungal activity, antidiabetic anti-inflammatory and gastroprotective properties. A study was undertaken to optimize the production of Aloe Vera-sour orange RTS beverage flavoured with ginger and to assess its quality and storage stability. The blended juice was prepared replacing 0 (control), 10, 20, 30 and 40% Aloe Vera gel in the sour orange juice with 10ml ginger extract. The drink were filled in sterilized bottles, pasteurized at 90°C for 10mins and stored at 5°C for 30 days. Titratable acidity, pH, TSS (°Brix), ascorbic acid and total sugar content of the beverages were monitored during storage according to the Standard AOAC methods. The sensory parameters of colour, taste, flavor, consistency and overall acceptability was assessed on a 7-point Hedonic scale. The titratable acidity, TSS and total sugars increased whereas the pH and ascorbic acid content decreased during storage. In the RTS beverage with 20% Aloe Vera gel, the total sugar increased from 14.1 to 17.2% and the ascorbic acid decreased from 61.4 to 52.7 mg/100ml during the 30 days of storage. The microbial analysis revealed that the prepared beverage was free from any microbial spoilage. The sensory analysis proved that RTS beverage made with 20% Aloe Vera liked the most, by judges with the overall acceptability score of 6.72. The results revealed that the RTS made with 20% Aloe Vera juice were acceptable upto 30 days of storage at 5°C. Utilization of the medicinal plants in fruit beverages will provide health benefits and reduces the risk of diabetes and cardiovascular diseases.

Key words: *Aloe Vera, functional drink, ginger, physico-chemical quality, sour orange*

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