



Research Paper

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Studies on microbial and sensory quality of custard apple RTS beverage

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ABSTRACT : The effect of chemical preservative of potassium metabisulphite was studied on the microbial and sensory quality of the custard apple RTS beverage stored at ambient temperature (28-32°C) for 180 days with an interval of 1 month. Mean score of taste panel for colour, taste, flavour, appearance and overall acceptance significantly ($p < 0.05$) decreased, whereas, the microbial contamination was found maximum at 30 days of storage, and then it was decreased.

KEY WORDS : Custard apple, RTS beverage, Microbiol and sensory quality

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The custard apple (*Annona squamosa* L.) is one of fruits which are still to be exploited to its maximum extent. It is native to Tropical America. Of the 40 genera of the Annonaceae family, genus *Annona* has 120 species, 6 of them having pomological significance. In India, custard apple is grown in Maharashtra, Gujarat, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, Bihar, Assam, Rajasthan, Orissa and Tamil Nadu. Its cultivation in India has been estimated to be 53,000 hectares with an annual production of 2770 thousand million tonnes (Anonymous, 2010). The large aggregate fruits are composed of peel, pulp and seeds. Pulp is cream coloured, custard like, granular, sweet with pleasant flavour and mild aroma. Fruit contains 45 per cent edible portion, 100 g of which has a composition of 70.5 g moisture, 23.5 g carbohydrates, 16 g protein, 0.4 g fat, 17 mg niacin, 37 mg vitamin and gives 104 k calories of energy (Singh, 1995). It is highly perishable nature and available for short period from 1st week of Oct to 3rd week of Nov. The short shelf life of this fruit coupled with the absence of appropriate on farm preservation and value addition, leads to its glut in market during on season, resulting in low prices, ultimately causing losses to the producers. In these circumstances there is need to develop standard techniques to reduce those post-harvest losses. Preparation of ready-to-serve beverage is one technique that fulfills the

requirement of standard technique to reduce the post-harvest losses, but it needs proper standardization of juice extraction method with suitable recipe.

RESEARCH METHODS

Procurement of the material and juice extraction:

Fully matured but ripe fruits were selected and graded. The fruits were washed and cleaned thoroughly and then peeling was done manually by hand. Two method of juice extraction were used for preparation of the product.

– For cold method of juice extraction, the pulp was extracted by scooping and kept in sterilized stainless steel container. The skin and seeds were separated and recorded.

– For hot method of juice extraction, the crushed pulp with half quantity of water heated up to 80°C for softening. The heated mass is passed through fine meshed silk cloth to extract the juice. The same process was employed to separate the pure juice content as in case of cold method.

Product preparation and storage:

For the preparation of RTS of different recipe, sugar syrup was prepared by adding water, citric acid and KMS. The prepared syruped was strained through coarse muslin cloth and then according to recipe required quantity of custard apple