



Research Paper

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Eco-dynamic studies on herbal based sapota beverages

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ABSTRACT : The present investigation was carried to evaluate the influence of various herbs on bio-chemical properties of herbal based sapota beverages. The product was prepared by using sapota with different type of bland viz. fruits (aonla, pineapple, kokum and tamarind) along with different spices and herbs. The known quantity of beverage base was filled in to aluminium foil pouches and heat sealed. The product was stored under ambient condition (22 - 35°C) for 6 months and evaluated for bio-chemical composition at an interval of two month up to completion of study. During study it was observed that a pattern of gradual increase in acidity, total soluble solids, reducing sugars, total sugars, whereas, decreasing trend was recorded in pH and non-reducing sugars during entire periods of storage.

KEY WORDS : Sapota beverage, Herbal instant beverage

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Sapota [*Manilkara achras* (Mill.) Fosberg] is a tropical fruit crop grown for its delicious and sweet fruits. India is considered to be the largest producer of the sapota in the world. The plants of sapota prefers coastal climate therefore, it is commercially, extensively and intensively cultivated in states like Gujarat, Maharashtra, Karnataka and Tamil Nadu. It has emerged as one of the major fruit of South Gujarat. At present the area and production under this crop is increased resulting glut in the market during season. Whereas, sapota is highly perishable in nature and cannot be stored at ambient as well as cool temperature for longer period. Therefore, fruit need to be disposed off as early as possible after harvest. Thus the inadequate post harvest management practices and poor shelf life lead to enormous losses from 25-30%. It is therefore, necessary to convert the sapota fruit in to the processed products to avoid post harvest losses and get value added product. However, in recent years the increasing consumer awareness has emphasized the need for functional beverages which provide a health benefit beyond energy and essential nutrients. Therefore, the present investigation was under taken to develops data base information and evaluated sensory properties of herbal instant beverages based on sapota under ambient condition (22 - 35°C).

RESEARCH METHODS

The fresh, uniformly matured sapota, ripened aonla, pineapple and dried kokum and tamarind with uniform size, different herbs and spices like mint, *tulsi*, orange peel, ginger, funnel, curry leaf, clove, cardamom, black papper formed the experimental material. Then fruits were thoroughly washed with clean tap water to remove any surface dust and dirt. Care was taken to see that the fruits should be well ripened with firm texture but not mushy in texture. Fruits were peeled with stainless steel knife, cut in to small pieces and removed fibrous material, central core and seeds from respective fruits. The pulp was prepared by the procedure of homogenization the fruit pieces in blender. The prepared pulp of different fruits was mixed together and known quantity of water was added and to homogenize stirred. The known quantity of beverage base was filled in to aluminium foil pouches and heat sealed. They were labeled appropriately with details of treatment, date, repetition, serial number and stored for the periodical observations. The pouches of herbal instant beverages were stored at an ambient temperature (22 to 35°C). These were then subsequently used for periodical evaluation at two month interval for a period of six months. The total soluble solids (oBrix) was determined with a hand refractometer. The pH was measured by a pH meter. Acidity, reducing sugar, total sugar and non-reducing sugar were estimated as per the procedures