



NUTRITIONAL AND SENSORY QUALITIES OF SWEET ORANGE BLEND STAR FRUIT CORDIAL

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Star fruit (*Averrhoa carambola* L.) is one of the tropical fruit and large numbers of ripened star fruits are wasted during the fruiting-season. Therefore, a study was conducted to develop mixed cordial from star fruit and sweet orange. Star fruit juice, in the amounts of 80, 70 and 60 ml were mixed with sweet orange juice for the formulation of 100 ml of cordial. The cordials were subjected to nutritional (Titrable acidity, pH, ascorbic acid and total sugar, microbial (Total plate count) and sensory analysis (Colour, Aroma, Taste, Consistency, Absence of off-flavour and Overall acceptability) after formulation and during storage. Sensory attributes were evaluated by 30 trained panelists using seven-point hedonic scale. The nutritional analysis of the developed cordials revealed that, titrable acidity (as citric acid), ascorbic acid and total sugar increased with increase in the level of sweet orange juice, with the 30% sweet orange juice level having the values of 0.42%, 23.72 mg/100 ml, and 10.34% respectively and pH 3.46. Sensory analysis showed significance difference between treatments. The cordials were subjected to storage studies at 30°C and RH of 80% for 11 weeks. The storage studies revealed that, the declining trends in ascorbic acid, pH and total sugar and increasing trend in titrable acidity. After 11 weeks storage, the mixed cordial of 70% star fruit juice with 30% sweet orange juice contained 6.96% moisture, 0.95% titrable acidity (as citric acid), 16.8 mg/100g ascorbic acid, 7.2% total sugar and 3.1 pH. No remarkable changes in sensory characters during storage period. The mixed cordial of 70% star fruit juice with 30% sweet orange juice received high acceptability for all the sensory attributes. No harmful total plate count was observed in cordials after formulation and during storage. Based on the results of assessment, the mixed cordial of 70% star fruit juice with 30% sweet orange juice was selected as best mixed cordial and which could be stored for 11 weeks without any significant changes in the quality attributes.

Keywords: *Cordial, quality characteristics, shelf life, star fruit juice, sweet orange juice*