

Storage studies of carbonated beverage from pomegranate juice

V.S. SANDHAN,* D.R. NANDRE AND B.M. KUSHARE¹

Department of Horticulture, College of Agriculture, (M.P.K.V.), NASHIK (M.S.) INDIA

ABSTRACT

Present investigation was undertaken to study storage life of carbonated beverage from pomegranate juice in different storage condition. Carbonated beverage with 10 per cent pomegranate juice and ginger juice 1 per cent was stored in ambient storage condition and cool storage. Increase in T.S.S., pH, reducing sugars, non-reducing sugars and total sugars as well as decrease in titrable acidity, ascorbic acid, anthocyanin content and score for all sensory attributes, was recorded in all treatments irrespective of storage condition. The rate of increase in T.S.S., pH, reducing sugars, non-reducing sugars and total sugars as well as decrease in titrable acidity, ascorbic acid, anthocyanin content and score for all sensory attributes was higher in ambient condition than cool storage condition.

Key words : Carbonated beverage, Pomegranate, Storage studies.

INTRODUCTION

Pomegranate (*Punica granatum L.*) is important fruit crop for Maharashtra as well as whole India mainly because of its versatile adaptability, drought tolerant nature and also steady and high yield. Pomegranate juice is useful for the patients suffering from Leprosy, high cholesterol level, heart patients and kidney problems. Processed fruit products will not only avoid the seasonal glut in the market but also helps in stabilization of market prices and provide incentive for increase in the area and production of pomegranate fruits. Pomegranate fruits can be processed into different products like juice, squash, syrup, jelly, wine, anardana, anar-rub (Adsule and Patil, 1995). Pomegranate juice can be utilized for preparation of ready-to-serve (RTS) beverage by adding cane sugar and citric acid and maintaining T.S.S. up to 15°Brix and 0.25 per cent acidity (Vaidya *et al.*, 1998). More *et al.* (1999) prepared ready-to-serve beverage from juice using 20 per cent juice and adding cane-sugar, citric acid by maintaining 15°Brix and 0.25 per cent acidity.

Khurdiya (1989) studied the carbonation in fruit beverages. For preparation of carbonated beverages, the ingredients required are water, sweeteners, acidulates, colorings, flavorings, carbon dioxide, clouding agents, emulsifiers etc. The fruit based carbonated drinks from lime, phalsa, jamun, ber, and apple and described the processing, preservation of their carbonated drinks (Khurdiya, 1990). He also standardized a formulation for orange concentrate (Khurdiya, 1990). Rokade *et al.* (2001) prepared carbonated beverage from grapes. The carbonated beverage with 0.3 per cent acidity and 14°Brix scored for the maximum organoleptic properties. Jadhav *et al.* (2002) conducted studies on preparation and storage

of carbonated beverage from tamarind juice.

MATERIALS AND METHODS

Pomegranate fruits:

Pomegranate fruits of ganesh variety were obtained from department of horticulture. The fruits of uniform size, color, and maturity were used for investigation.

Chemicals:

Most of the chemicals used for this investigation are of analytical grade obtained from Sigma Trading Company, Nashik.

Physical characteristics of matured pomegranate fruits:

Five fruits were selected randomly. The length, width and weight were measured and these values were added to find out average.

Extraction of fruit juice :

The juice was extracted by squeezing the arils gently through two layers of muslin cloth. The extracted juice was centrifuged at 5000 rpm for 20 min. (Siddapa, 1943)

Analysis of juice:

The Pomegranate juice was analyzed for total soluble solids (T.S.S.), acidity, pH, total soluble sugars, reducing sugars, non-reducing sugars, anthocyanin content and ascorbic acid content etc.

Total soluble solids (T.S.S.):

Total soluble solids (T.S.S.) in the juice were measured with the help of Erma hand refractometer.

* Author for correspondence. ¹ Krishi Vigyan Kendra, KOSBAD (M.S.) INDIA