

# Study of qualitative attributes of mixed juice using carrot, spinach and beetroot

Rupendra Singh and Devendra Kumar

Study was conducted to evaluate the qualitative attributes of mixed juice using carrot, spinach and beetroot. Carrot, spinach and beetroot juice prepared with the composition of 90:5:5, 85:10:5 and 80:15:5 and the samples were stored at refrigeration temperature (5°C), B.O.D. incubator (25°C) and room temperature (35°C) for 0, 15, 30 and 45 days. The physico-chemical qualities (TSS, pH and vitamin C), microbial growth and sensory quality (colour, taste, flavour, texture and overall acceptability) were evaluated. The TSS (total soluble solid) increased with increase of storage period in all composition of juices but TSS has been decreased simultaneously in juices  $C_{90}:S_5:B_5$ ,  $C_{85}:S_{10}:B_5$  and  $C_{80}:S_{15}:B_5$  in each storage period. The TSS values of the samples 90:5:5, 85:10:5 and 80:15:5 after 45 days of storage were observed as 14.83, 13.97 and 13.33 for B.O.D. incubator during storage. It was observed that pH of all the samples were decreased at 15, 30, and 45 days of storage. The pH values of the sample composition 90:5:5, 85:10:5 and 80:15:5 after 45 days of storage were observed as 4.44, 4.47 and 4.50 at room temperature and 4.40, 4.44 and 4.47 at B.O.D. incubator condition, respectively. Decrease in the vitamin C was observed with increase in the level of storage period of carrot, spinach and beetroot composition in the samples. The ascorbic acid values of the samples 90:5:5, 85:10:5 and 80:15:5 after 45 days of storage were observed as 3.95, 3.60 and 3.12 mg/100ml at room temperature condition and the ascorbic acid values of the samples 90:5:5, 85:10:5 and 80:15:5 after 45 days of storage were observed as 3.93, 3.70 and 3.12 mg/100ml at B.O.D. incubator condition, respectively. The microbial growth increases with increase in storage period. The beverage samples stored at refrigerated condition was found superior over other storage condition followed by BOD incubator and room temperature conditions. Sensory panel recommended best sample containing 90:5:5 ratio of carrot, spinach and sugarbeet juice as taste, colour and texture points of view with the score of overall acceptability (8.1).

**Key Words :** Blended juice, Physico-chemical, Microbial-growth, Sensory

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