Journal of Food Processing & Technology

Bal et al., J Food Process Technol 2014, 5:5
DOI: 10.4172/2157-7110.1000329

Research Article Open Access

Evaluation of Quality Attributes During Storage of Guava Nectar Cv. Lalit from Different Pulp and TSS Ratio

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Abstract

A study was undertaken for preparation of nectar using guava cv. Lalit with respect to pulp percentage and TSS (°Brix) as per the treatments and the processed nectar was analyzed in CRD (Completely Randomized Design). Physico-chemical parameters viz., TSS, acidity, ascorbic acid, non-reducing sugars, total sugars and viscosity as well as organoleptic attributes viz., colour, flavour, taste and overall acceptability of nectar were evaluated at an interval of 2 months up to 8 months of storage. An overall result of fruit nectar prepared from guava was found better in the treatment P_4B_2 (20% pulp + 15°Brix TSS) which was statistically at par with P3B3 (16% pulp + 17°Brix TSS). Results indicated that the minimum physico-chemical changes viz., TSS (15 -15.83°Brix), acidity (0.3 - 0.35%), reducing sugars (6.07 - 4.77%), total sugars (17.02 - 17.71%) and viscosity (47.76 - 48.48N.s/m^2) showed increasing trend while ascorbic acid (14.7 - 13.82 mg/100 g), non-reducing sugars and sensory attributes showed decreasing values with duration of storage. Considering above chemical constituents as well as sensory attributes of processed nectar, both the treatments P_4B_2 (20% pulp + 15°Brix TSS) and P_3B_3 (16% pulp + 17°Brix TSS) were found better for nectar preparation. The variety Lalit is commercially used in processing industry due its attractive pulp colour and could make significant contribution to food industry.

Keywords: Guava; Pulp; Nectar; TSS; Bio-chemical parameters; Storage

Introduction

Guava has been aptly called the "Apple of Tropics" and "Poor man's apple" and the fruit consists of 20% peel, 50% flesh portion and seed core. It also contains 74-84% moisture, 13-26% dry matter, 0.8-1.5% protein, 0.4-0.7% fat and 0.5-1.0% ash and the fruit is considered as an excellent source of vitamin C (299 mg/100 g) and pectin (1.15%) [1]. The fruit has an appreciable amount of minerals such as phosphorus (23 - 37 mg/100 g), calcium (14 - 30 mg/100 g), iron (0.6 - 1.4 mg/100 g) as well as vitamins like niacin, thiamine, riboflavin and vitamin A [2,3]. The fresh guava has short shelf life of one week because of high moisture content [4]. The post-harvest losses occur to the tune of about 22% [5]. Guava fruit is normally consumed as fresh as a dessert fruit or in processed form as puree, juice, concentrate, jam, jelly, cheese, toffee, fruit flakes, squash, syrup, nectar, powder, wine, vinegar, ready to use snacks, drinks and dehydrated canned products [6]. The processing of fruit into various products is one of the best ways to reduce the losses [7,8].

Nectar is one of the refreshing beverages having zero carbonation, relatively few preservatives and excellent source of several important vitamins and minerals and is used as health drink [9,10]. Therefore, it is necessary to utilize guava for making nutritious processed health food like nectar to increase availability over an extended period and to stabilize the price during the glut season [11,12]. To utilize the produce at the time of glut and to save it from spoilage, the processing technology for preparation guava nectar is highly required [13]. Lalit is one of the most popular and commercial variety for preparation of nectar due its attractive pulp colour, flavour and taste. Choudhary et al. [11] evaluated guava varieties and standardization of recipe for nectar preparation and reported that nectar prepared from guava variety L-49 had highest ascorbic acid, pH and non-reducing sugar. The recipe with 20% pulp, 0.3% acidity and 17°Brix (TSS) recorded highest organoleptic score. The acidity, TSS, total and reducing sugar of nectar showed an increasing trend during the progress of storage up to five months under ambient conditions. Kalra and Tandon [12] screened out the eight samples of guava nectar contains 15% pulp, 12 to 14% TSS and 0.20-0.35% acidity. The nectar were fortified with 100mg vitamin C and stored for 10 months in glass bottles. Organoleptic evaluation indicated that the sample having 14% TSS and 0.25% acidity was found to be the best followed by 14% TSS and 0.20% acidity, and 12% TSS and 0.25% acidity. During storage, the TSS and vitamin C decreased while titrable acidity was increased by 0.02 - 0.04%. There has been very less research work for processing of guava nectar using variety Lalit. Hence, the present investigation has been carried out to assess the effect of TSS, pulp percentage and storage on physico-chemical and organoleptic attributes of guava nectar.

Material and Methods

Raw material and sample preparation

The experiment was conducted at Department of Post-Harvest Technology, ASPEE College of Horticulture and Forestry, Navsari Agricultural University, Navsari. Fully matured and ripe guava fruits of uniform size, free from mechanical damage, bruises and fungal attack were procured from Navsari market, Gujarat. The fruits were washed with tap water in the laboratory. Fruits were used for preparation of nectar with four different pulp concentrations i.e. P_1-8%, P_2-12%, P_3-16% and P_4-20% as well as three level of TSS i.e. B_1 -13°Brix, B_2 -15°Brix and B3-17°Brix and 12 treatments in the combination of pulp to TSS ratio i.e.P_1B_1, P_1B_2, P_1B_3, P_2B_1, P_2B_2, P_2B_3, P_3B_1, P_3B_2, P_3B_3, P_4B_1, P_4B_2

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Received April 04, 2014; **Accepted** May 13, 2014; **Published** May 28, 2014

Citation: Bal LM, Ahmad T, Senapati AK, Pandit PS (2014) Evaluation of Quality Attributes During Storage of Guava Nectar Cv. Lalit from Different Pulp and TSS Ratio. J Food Process Technol 5: 329. doi:10.4172/2157-7110.1000329

and P_4B_3 were (8:13, 8:15, 8:17, 12:13, 12:15, 12:17, 16:13, 16:15, 16:17, 20:13, 20:15 and 20:17) respectively. The pulp was extracted by using pulper machine and strained through 1 mm stainless steel sieve. Nectar was prepared as per ratio of pulp and TSS of the treatments [9,14]. The prepared nectar was heated at 85°C for 30 minutes with acidity was maintained 0.3%. The preservative of potassium metabisulphite @ 2 mg/kg of was added in the final product. The prepared nectar product was filled into the clean and sterilized plain glass bottle of 200 ml and sealed with crown cork. The filled bottle was pasteurized in boiling water for 30 minutes and cooled and stored in room temperature. The processed products for physico-chemical evaluation as well as organoleptic evaluation were periodically observed up to 8 months of storage at an interval of two months i.e. 0, 2, 4, 6, and 8 months.

Quality evaluation (Physico-chemical evaluation)

TSS: The Total Soluble Solids (TSS) value of the guava nectar was recorded by using hand refractometer (Erma, Japan) having range of 0-32 °Brix. In each treatment, three readings were taken and their average value was expressed in °Brix.

Titrable acidity: The titrable acidity of guava nectar was estimated by titrating against 0.1N NaOH solution using phenolphthalein as an indicator, light pink colour is taken as donation of acid of guava nectar [15].

Reducing sugars: The titrimetric method of Lane and Eynon described by Ranganna [15] was adopted for estimation of reducing sugars using methylene blue as an indicator and colour is changed to brick red colour under the heat (indication point of percent of sugar in sample).

Ascorbic acid: The titrimetric method described as 3% metaphosphoric acid and titrated against standard 2-6 dichlophenol indophenols dye solution was adopted for determination of ascorbic acid [15].

Total sugars: Lane and Eynon described by Ranganna [15] were adopted for estimation of total sugars.

Non-reducing sugars: The value of non-reducing sugars was recorded by the subtracting the value of reducing sugars from total sugars.

Viscosity: The viscosity of nectar was measured using rheological instrument rheometer (Physica MCR301, Germany). The rotor head of rheometer was performed several revolutions at various speed to check the balancing and to maintain thermal equilibrium and the calibration was done with respect to time and temperature by putting the drop of nectar on platform to measure viscosity. Graphical and tabulated value of viscosity (N.s/m^2) of was got from the software.

Sensory analysis

The sensory parameters of colour, flavour, taste and overall acceptability were evaluated with 10 trained panelist based on 9 point Hedonic rating scale with maximum score considered as the best [15].

Statistical analyses

The experimental data were analyzed by completely randomized design with factorial concept (FCRD) according to procedure described by Panse and Sukhatme [16]. The treatment differences were tested by 'F' test of significance of the basis of null hypothesis. The appropriate standard errors (S.Em.+) were calculated in each case and the critical differences (C.D.) at 5% level of probability were worked out to check significant of the treatment.

Result and Discussion

The effect of TSS, pulp percentage on physico-chemical parameters during storage

It was observed from Table 1 that the biochemical parameter i.e. TSS (°Brix) of guava nectar increased during 8 months of storage. The interaction (P×B) effect of nectar showed non-significant results in respect to TSS at 0 month and found significant from 1-8 months. The minimum change of the interaction effect was found in P_4B_2 (15 to 15.83) as compare to other treatments. The increase of TSS in the nectar was due to conversion of left over polysaccharides into soluble sugar and formation of water soluble pectin from protopectin. Similar type of studies were undertaken in canned mango nectar [17], guava nectar [10,11,13], guava beverages [18,19] and guava-aonla blended beverage [20].

Reducing sugars (Table 2) increased significantly during storage. It is very important component for a processed product with respect to quality, shelf life, taste and discoloration during storage. The minimum changes in interaction (P×B) was found in treatment P_4B_2 (11.06 to 13.33%) which is statistically at par with treatments respectively during storage. Increase in reducing sugars might be assigned to the

Treatment	TSS (0Brix)					Titrable acidity (%)				
	0 Months	2 Months	4 Months	6 Months	8 Months	0 Months	2 Months	4 Months	6 Months	8 Months
P_1B_1	13	13.17	13.48	13.73	14.15	0.3	0.31	0.33	0.36	0.39
P_1B_2	15	15.12	15.47	15.66	16.08	0.3	0.32	0.35	0.36	0.39
P_1B_3	17	17.14	17.42	17.55	18.08	0.3	0.32	0.34	0.36	0.39
P_2B_1	13	13.15	13.42	13.69	14.07	0.3	0.34	0.34	0.36	0.39
P_2B_2	15	15.14	15.43	15.69	16.07	0.3	0.32	0.34	0.36	0.38
P_2B_3	17	17.12	17.39	17.29	18.08	0.3	0.31	0.34	0.36	0.39
P_3B_1	13	13.15	13.45	13.65	13.92	0.3	0.31	0.34	0.36	0.38
P_3B_2	15	15.1	15.42	15.67	15.91	0.3	0.32	0.33	0.35	0.38
P_3B_3	17	17.08	17.37	17.57	17.86	0.3	0.3	0.33	0.33	0.34
P_4B_1	13	13.07	13.46	13.61	13.89	0.3	0.32	0.33	0.35	0.36
P_4B_2	15	15.09	15.21	15.57	15.83	0.3	0.31	0.32	0.33	0.34
P_4B_3	17	17.11	17.45	17.67	18.03	0.3	0.3	0.31	0.34	0.35
S. Em +	0	0.012	0.035	0.038	0.015	0	0.005	0.004	0.005	0.006
CD at 5%	NS	0.037	0.104	0.111	0.044	NS	0.015	0.012	0.014	0.018
CV %	0	0.14	0.4	0.42	0.16	0	2.83	2.23	2.51	2.94

Table 1: Effect of pulp percentage and TSS on total soluble solids and acidity of guava nectar.

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	Total sugars (%)					Non reducing sugars (%)				
Treatment	0 Months	2 Months	4 Months	6 Months	8 Months	0 Months	2 Months	4 Months	6 Months	8 Months
P_1B_1	12.13	12.26	12.45	12.85	13.23	3.66	3.36	2.91	2.62	2.28
P_1B_2	14.35	14.44	14.72	15.11	15.42	4.63	4.36	3.91	3.64	3.29
P_1B_3	16.17	16.16	16.3	16.79	17.1	5.73	5.4	4.97	4.73	4.33
P_2B_1	12.69	12.71	12.84	13.58	14.02	3.81	3.51	3.02	2.75	2.45
P_2B_2	14.79	15.1	15.14	16.04	16.4	4.84	4.58	4.11	3.82	3.48
P_2B_3	16.41	16.53	16.68	17.08	17.42	5.82	5.58	5.14	4.87	4.57
P_3B_1	13.5	13.69	13.77	14.38	14.87	4.06	3.83	3.33	3.1	2.81
P_3B_2	16.07	16.2	16.45	17.01	17.38	5.82	5.55	5.1	4.85	4.57
P_3B_3	16.99	17.06	17.19	17.58	17.8	6.04	5.83	5.35	5.09	4.85
P_4B_1	14.13	14.24	14.21	14.58	14.86	4.23	3.99	3.37	3.12	2.83
P_4B_2	17.14	17.19	17.26	17.62	17.87	6.08	5.87	5.39	5.17	4.91
P_4B_3	17.02	17.07	17.08	17.48	17.71	6.07	5.79	5.26	5.04	4.77
S. Em +	0.094	0.049	0.062	0.096	0.145	0.086	0.052	5.052	0.055	0.051
CD at 5%	0.277	0.145	0.181	0.28	0.425	0.252	0.152	0.153	0.162	0.149
CV %	1.09	0.57	0.7	1.05	1.56	2.95	1.88	2.1	2.36	2.53

Table 2: Effect of pulp percentage and TSS on total sugar and non-reducing sugar of guava nectar.

Treatment	Ascorbic acid (mg/100 g)					Viscosity (N.s/m^2)				
	0 Months	2 Months	4 Months	6 Months	8 Months	0 Months	2 Months	4 Months	6 Months	8 Months
P_1B_1	12.75	12.58	12.11	11.91	11.65	3.25	3.62	3.78	3.93	4.08
P_1B_2	14.7	14.52	14.21	14.08	13.82	5.15	5.28	5.44	5.57	5.05
P_1B_3	14.68	14.55	14.18	13.96	13.63	8.22	8.33	8.45	8.58	8.75
P_2B_1	15.4	15.25	14.92	14.71	14.45	13.56	13.83	13.93	14.17	14.27
P_2B_2	16.3	15.88	15.52	15.33	14.96	14.81	15.19	15.44	15.6	15.91
P_2B_3	16.48	16.1	15.81	15.52	15.03	18.21	18.37	18.48	18.61	18.73
P_3B_1	17.66	17.39	17.02	16.77	16.47	39.5	40.2	40.35	40.47	40.58
P_3B_2	19	18.84	18.62	18.39	18.03	43.71	43.82	43.96	44.22	44.51
P_3B_3	19.38	19.08	18.86	18.68	18.34	43.46	43.79	44.04	44.23	44.38
P_4B_1	20.64	20.29	19.95	19.72	19.38	43.2	43.57	43.96	44.18	44.49
P_4B_2	22.99	22.71	22.47	22.2	21.93	47.76	47.91	48.1	48.32	48.48
P_4B_3	23.26	22.86	22.51	22.27	21.84	50.63	51.2	51.35	51.69	51.91
S. Em +	0.137	0.11	0.087	0.078	0.057	0.262	0.206	0.199	0.164	0.111
CD at 5%	0.399	0.32	0.254	0.229	0.167	0.765	0.602	0.582	0.479	0.323
CV %	1.33	1.08	0.88	0.8	0.6	1.64	1.28	1.23	1.01	0.64

Table 3: Effect of pulp percentage and TSS on ascorbic acid and viscosity of guava nectar.

partial acid hydrolysis of starch and disaccharide of nectar converted into invert sugar and also inversion of part of non-reducing sugars into glucose and fructose and gradual degradation of polysaccharides in pulp through acid hydrolysis. These results were agreed with the investigation reported earlier for canned mango nectar [17], guava nectar [10,11,13], guava beverages [18,19] and guava-aonla blended beverage [20].

Titrable acidity (%) (Table 1) of guava nectar increased significantly during storage. The minimum changes in interaction (P×B) was found in P_3B_3 (0.3 to 0.34%) is statistically at par with P_4B_3 (0.3-0.35%) during storage. The increase in acidity might be due to the accelerated degradation of pectin substances in nectar and the acidity content in guava nectar showed the minimum change during storage [21].

Viscosity of guava nectar show significantly increased during storage (Table 3). The minimum changes in interaction (P×B) were found in treatment P_4B_3 (47.76 to 48.48 N. s/m^2) during storage. It was found increasing trend during storage that may be due to TSS and soluble sugar increases in which the increase of strain and shearing rate and decrease of flow index and decrease in consistency of product with increase in temperature. As the flow index of nectar decreases which helps to develop pseudo plasticity and increases in viscosity. Similar type of research was reported earlier by Gowda and Ramanjaneya [22] in canned mango juice, Jain et al. [23] for nectar and RTS from late maturing mango varieties, Khurdiya and Lothra [24] for kinnow mandrin juices and El-Mansy et al. [25] for mango and papaya nectar.

Ascorbic acid of guava nectar decreased significantly during the entire storage period of nine months (Table 3). The minimum changes of ascorbic acid ware observed in treatment P_1B_2 (14.7 - 13.82 mg/100g). This reduction might be due to oxidation of ascorbic acid into dehydroascorbic acid by oxygen. These losses of ascorbic acid were attributed to the effect of processing, storage time and exposure to light. These findings were accordance with Murari and Verma [10], Choudhary et al. [11] and Ahmed et al. [26] for guava nectar, Pandey [18] for guava beverages, Das [27] for jamun nectar products, Chakraborthy et al. [17] in canned mango nectar, Rabbani and Singh [28], Adina et al. [29] in mango nectar and Karla et al. [30] in mango papaya beverage.

Non reducing sugars in guava nectar showed the minimum changes in treatment P_4B_2 (6.07 to 4.77%) (Table 2) during storage. This gradually decreased during storage which might be due to significant increase in reducing sugar [9] by acid hydrolysis of reducing sugar and thereby inversion of non-reducing sugar to reducing sugar, However, the pattern of decrease of non-reducing sugar percent varied according to treatments. Similar types of observations were also reported by

Treatment	Colour (Out of 9 point)					Flavour (Out of 9 point)				
	0 Months	2 Months	4 Months	6 Months	8 Months	0 Months	2 Months	4 Months	6 Months	8 Months
P_1B_1	7	6.67	6.63	6.57	6.37	7.17	7	6.93	6.73	6.6
P_1B_2	7.47	7.1	7.07	6.83	6.53	7.17	7.03	7.03	6.87	6.67
P_1B_3	7.03	7.17	7.07	7	6.9	7.1	7.07	7.23	6.9	6.73
P_2B_1	7.67	7.23	7.2	7.03	6.9	7.1	7.07	7	6.97	6.83
P_2B_2	7.4	7.3	7.13	7.07	7	7.2	7.17	7	7.03	6.87
P_2B_3	7.53	7.37	7.3	7.1	7.03	7.47	7.4	7.33	7.2	7
P_3B_1	8.27	7.87	7.4	7.43	7.33	7.73	7.67	7.6	7.27	7.2
P_3B_2	8.37	7.93	7.8	7.77	7.8	8.37	8.3	8.3	8.1	7.9
P_3B_3	8.73	8.47	8.33	8.33	8.17	8.87	8.8	8.67	8.43	8.17
P_4B_1	8.3	8.07	7.93	7.73	7.8	8.5	8.37	8.1	7.77	7.57
P_4B_2	9	8.8	8.67	8.47	8.27	8.87	8.93	8.73	8.5	8.27
P_4B_3	8.33	8.1	8.1	7.87	7.73	8.47	8.4	8.23	8	7.77
S. Em +	0.134	0.123	0.144	0.105	0.126	0.17	0.175	0.12	0.116	0.083
CD at 5%	0.391	0.36	0.422	0.308	0.368	0.495	0.511	0.348	0.338	0.242
CV %	2.93	2.78	3.32	2.47	2.99	3.75	3.9	2.69	2.68	1.96

Table 4: Effect of pulp percentage and TSS on colour and flavour of guava nectar.

Treatment	Taste (Out of 9 point)					Over all acceptability (Out of 9 point)				
	0 Months	2 Months	4 Months	6 Months	8 Months	0 Months	2 Months	4 Months	6 Months	8 Months
P_1B_1	7.57	7.43	7.3	6.93	6.8	7.24	7.03	6.96	6.74	6.59
P_1B_2	7.5	7.4	7.33	7.03	6.9	7.3	7.18	7.14	6.91	6.7
P_1B_3	7.5	7.47	7.4	7.2	7.07	7.21	7.23	7.23	7.03	6.9
P_2B_1	7.57	7.5	7.43	7.27	7.17	7.44	7.27	7.21	7.09	6.97
P_2B_2	7.67	7.57	7.47	7.4	7.27	7.42	7.34	7.2	7.17	7.04
P_2B_3	7.7	7.67	7.67	7.53	7.5	7.57	7.52	7.43	7.28	7.18
P_3B_1	7.93	7.83	7.8	7.73	7.63	7.98	7.8	7.7	7.48	7.39
P_3B_2	8.33	8.2	8.07	7.93	7.77	8.33	8.21	8.06	7.93	7.82
P_3B_3	8.8	8.63	8.57	8.3	8.2	8.81	8.66	8.52	8.36	8.18
P_4B_1	8.37	8.27	8.07	7.83	7.7	8.39	8.18	8.03	7.78	7.69
P_4B_2	8.9	8.77	8.7	8.6	8.47	8.92	8.83	8.7	8.52	8.33
P_4B_3	8.3	8.1	7.97	7.83	7.7	8.37	8.2	8.1	7.9	7.73
S. Em +	0.119	0.099	0.089	0.059	0.1	0.113	0.115	0.111	0.089	0.097
CD at 5%	0.347	0.29	0.26	0.173	0.292	0.329	0.338	0.323	0.259	0.285
CV %	2.58	2.18	1.98	1.35	2.31	2.47	2.57	2.5	2.05	2.3

Table 5: Effect of pulp percentage and TSS on Taste and over all acceptability of guava nectar.

Choudhary et al. [11] in guava nectar, Pandey [18] in guava beverages, Chakraborthy et al. [17] in canned mango nectar, Rabbani and Singh [28], Adina et al. [29] in mango nectar, Kalra et al. [30] in mango: papaya beverage.

Total sugars (%) of guava nectar showed significantly increasing trend during nine months of storage due to the factor pulp percentage and TSS (°Brix) are given in table 2. The minimum change of total sugars was observed in treatment P_4B_3 (17.02 - 17.71%) Total sugar was increased during storage period is due to solubilization of pulp constituents and hydrolysis of polysaccharides including pectin and starch materials. Similar types of observation for total sugar of various products have been reported by Choudhary et al. [11] in guava nectar, Pandey [18] stability of guava beverages, Murari and Verma [10] pulp extraction methods and quality of guava nectar, Chakraborthy et al. [17] in canned mango nectar, Rabbani & Singh [28] in mango nectar and Karla et al. (1991) in mango and papaya beverage.

The effect of TSS, pulp percentage on organoleptic qualities of guava nectar during storage. The maximum colour score of guava nectar was found in treatment P_4B_2 (9.00 - 8.27) is statistically at par with P_3B_3 (8.73 - 8.17) (Table 4) during storage. The colour score showed decreasing trend during storage which might be due to the action of acidity which enhances the hydrolytic reaction causes browning and acid also enhances the millard reaction and caramelization which causes more browning in product. Polyphenolic compound present in fruit pulp also reacts with enzymes to get discoloration. These findings were accordance with Kalra & Tandon [12] for guava nectar, Chakraborthy et al. [17] for canned mango nectar, Pandey [18] for guava beverages, Mall and Tondon [20] for guava-aonla blended beverage, Kumar et al. [21] for musambi RTS Beverage.

The maximum flavour mean score found in treatment P_4B_2 (8.87 - 8.27) The score of nectar showed decreasing significantly during storage due to high level of acid that reacts with the product unpleasant volatile odour and could be due to the slight fermentation of beverage and gas production. There has been significant decline in flavour score of guava nectar product with the advancement of storage period [11,20,21].

The maximum taste mean score of guava nectar was found in treatment P_4B_2 (8.90 - 8.47) during storage (Table 5). It may be due to more pulp percentage and the physico-chemical constituent of fresh guava pulp. This could be caused by development of acidity and caramelization. These findings were accordance with Kalra & Tandon [12] and Choudhary et al. [11] for guava nectar, Chakraborthy et al. [17] for canned mango nectar, Pandey [18] for guava beverages, Mall and Tondon [20] for guava-aonla blended beverage, Kumar et al. [21] for musambi RTS Beverage.

The maximum overall acceptability mean score of guava nectar was found in treatment P_4B_2 (8.83 - 8.33) during storage (Table 5). It may be due to non-enzymatic reactions like caramelization and millard. The score of nectar was declined significantly during storage owing to oxidative reaction to deteriorate the scores of colour, flavour as well as taste. These findings were accordance with Kalra and Tandon [12] and Choudhary et al. [11] for guava nectar, Chakraborthy et al. [17] for canned mango nectar, Pandey [18] for guava beverages, Mall and Tondon [20] for guava-aonla blended beverage, Kumar et al. [21] for musambi RTS Beverage.

Conclusion

The results investigation showed that the minimum changes in bio-chemical parameter of guava nectar viz. total soluble solids, reducing sugars, titrable acidity, ascorbic acid, non-reducing sugars, total sugars and viscosity was found in treatment P_4B_2 is statically at par with P_3B_3 than the rest of the treatment combinations during storage. From the organoleptic parameters of guava nectar viz. colour, flavour, taste and overall acceptability, it was found higher in treatment P_4B_2 is statically at par with P_3B_3 during storage. From above result, it can be concluded that among different treatment combinations, treatment P_4B_2 (20% pulp + 15°Brix TSS) and P_3B_3 (16% pulp + 17°Brix TSS) are the best combinations for preparation of guava nectar. It will also generate opportunity for self-employment by starting small scale processing unit that could be remunerative to the growers and could make significant contribution to food industry.

Acknowledgement

The authors are thankful to Dr. B. V. Padhiar, Dr. Dev Raj, Prof. J. M. Patel and Prof. H. N. Chhatrola, Navsari Agricultural University, Navsari for their useful advice as well as sensory evaluation of nectar during experimentation.

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