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# Qualitative And Shelf Life Evaluation Studies On Kiwi Fruit (*Actinida Deliciosa)* Nectar .

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**ABSTRACT:**

Kiwi fruit has a brown hair peel with white pulp and green flesh. It has tiny black seed and green creamy and yummy flesh. Immature fruits are hard while mature ones are softer and yield to little pressure. They are full of vitamin C and act as good appetizers in salads, fish, meat dishes, puddings, cakes and pies. In this experiment kiwi fruit were used in preparation of RTS in different ratio of pulp.. Highest score of 0,3 and 6 month storage period were 87.00, marks in $T_4$ followed by 82.17,81.69,81.63,80.63 77.45 and 75.66 in $T_2$,$T_5$,$T_7$,$T_3$,$T_6$ and $T_1$ respectively.

**Key word:** Kiwi fruit, RTS, Vit- c, nectar, pulp.

## INTRODUCTION:

The Kiwifruit is fruit with a very interesting history and whose recent rise in popularity reflects a combination of an appreciation for its taste, nutritional value, unique appearance and, surprisingly its changing name. Native to China, Kiwifruits were originally known as yang Tao. They were brought to New Zealand from China by missionaries in the early 20th century with the first commercial plantings occurring several later.

In 1960, they were renamed Chinese Gooseberries. In 1961, Chinese Gooseberries made their first appearance at a restaurant at a restaurant in the United States wire subsequently "discovered" by an American produce distributor who felt that U.S market would be very receptive to this uniquely exotic fruit. She initiated the import of these fruits into the United States in 1962, but to meet what was felt to be burgeoning demand, changed its name from Chinese gooseberry to kiwi fruit in honor of the skin of this unique fruit. Currently, Italy, New Zealand, Chile, France, Japan and the United Sate are among the leading commercial prouder of kiwifruit.

In order to better help you identify foods that feature a high concentration of nutrients for the calories they contain, we created a Food Rating System. This system allows us to highlight the foods that are especially rich in particular nutrients. The following chart shows the nutrients for which this food is either an excellent, very good, or good source (below the chart you will find a table that explains these qualifications).If a nutrient is not listed in the chart, it does not necessarily mean that the food doesn't contain it. It simply means that the nutrient is not provide in a sufficient amount or concentration to meet our rating criteria. (To view this food's in-depth nutritional profile that includes values for dozens of nutrients-not just the ones rated as excellent, very good-please use the link below the chart). To read this chart accurately, you'll need to glance up in the link below the top left corner where you will find the name of the food and the serving size we used to calculate the food's nutrient composition.

This serving size will tell you how much if the food you need to eat to obtain the amount of nutrients found in the chart. Now returning to the chat itself, you can look next to the nutrient name in order to find the nutrient amount it offers, the percent Daily Value (DV%) that this food and nutrient, and the rating we established in our rating system.

For most of our nutrient ratings, we adopted the government standards for food labeling that are found in the U.S Food and Drug Administration's "Reference Value for Nutrition Labeling". Kiwi fruit has a brown hair peel with white pulp and

green flesh. It has tiny black seeds and green creamy and yummy flesh. Immature fruits are hard while mature ones are softer and yield to little pressure. They are full of vitamin C and act as good appetizers in salads, fish, meat dishes, puddings, cakes and pies. However most
of us are unaware about the varied health benefits of this delicious fruit. It is known that conventional processing of kiwifruit involves some degradation of quality characteristics as well as loss of color and flavor. On the other hand, processing use of small-sized kiwifruit is of value in maintaining the high quality standard of fruit required on the fresh market. Recent estimates show that c. 30% of Italian kiwifruit production in 1989 was rejected from the fresh market. Since ancient times, chines used it as health tonic. Especially, for women after childbirth and for children to enhance immunity. In the early 1900, kiwi fruit was fist exported to Asia as an ornamental vine. Americans tasted the year 1904 and it reached New Zealand in 1906. The potential nutritional benefits of the exotic fruit were identified by the New Zealanders and they started cultivating it commercially.

Kiwi fruit has a brown hair peel with white pulp and green flesh. It has tiny black seed and green creamy and yummy flesh. Immature fruits are hard while mature ones are softer and yield to little pressure. They are full of vitamin C and act as good appetizers in salads, fish, meat dishes, puddings, cakes and pies. However most of us are unaware about the varied heath benefits of this delicious fruits. Like avocados and bananas, kiwifruit contain substances called compounds that are associated that associated with the latex-fruit allergy syndrome. There is strong evidence of the cross-reaction between latex and these foods. If you have a latex allergy, you may very likely be allergic to these foods as well. Processing the fruit with ethylene gas increases these enzymes; organic produce not treated with gas will have fewer allergy-causing compounds. In addition, cooking the food deactivates the enzymes.

Packed with more vitamin C than an equivalent amount of orange, the bright green flesh of the kiwifruit speckled with tiny black seeds adds a dramatic tropical flair to any fruit salad. California kiwifruit is available November through May, while the New Zealand crop hits the market June through October making fresh kiwi available year found.

The kiwifruit is a small fruit approximately 3 inches long and weighing about four ounces. Its green flesh is almost creamy in consistency with an invigorating taste reminiscent or strawberries, melons and bananas. Yet with its own unique sweet flavor.

This chart graphically details the % DV that a serving of kiwifruit provides for each of the nutrients of which it is good, very good or excellent source according to our food rating system. Additional information about the amount of these nutrients provided by kiwifruit can be found. A link that takes you to the In-depth nutritional profile for kiwifruit, featuring information over 80 nutrients, can be found under the food rating system chart.

**Methodology:**

The present research work on "Qualitative and shelf life evaluation of nectar from kiwi fruit (*Actinidia deliciosa*)". Was carried out at State institute of Food Processing Technology, 18-B Ashok Marg, Lucknow 226001, India, at Microbiology section during year 2013-2014. The data were recorded on various physical & chemical parameters. The results have been described and discussed in concerned chapters. Kiwi fruit *Actinidia deliciosa* was selected for experiment which was procured from local market Saharaganj food bazaar Lucknow and brought to the laboratory within the same day and stored at room temp. The method of nectar making adopted as per procedure described by Demczuk junior (2007)[1]. The physical and chemical analytical procedure adopted according to A.O.A.C. (1970) & Rangana (1986) [(2&3)].

**Experimental Findings:**

Kiwi fruit were physically and analyzed for , whereas chemical parameters like pH, T.S.S., acidity, ascorbic acid, reducing sugar, non-reducing sugar, total sugar and tannin and pectin was observe 3.60, $14^0$B, 0.45%, 118.50 mg, 7.50%, 6.45%, 13.50 %, 0.20% and 0.45% respectively. Analyzed for length, diameter, weight, specific gravity, pulp, coloru and flavor

were found 6.32 cm, 85.10 gm, 0.95, 80% and brown bark greenish coloru with pleasant flavor respectively.

The data represented in table no. 3 and figure no.3 are pertaining to chemical characteristics of kiwi fruit nectar at zero period storage pH of the nectar was recorded in the range of 3.5 to 3.75 highest put value 3.75 was observed in $T_1$ while minimum value 3.50 was found in $T_4$.

Total soluble solids were found almost similar $15^0$B in all the treatment.

The acidity was detected 0.25 % (as citric acid) uniformly in each treatment.

Ascorbic acid was estimated in the range of 4.60 to 27.40 mg/ 100. In which maximum 27.40 mg ascorbic acid was found in $T_5$ where as 4.60 mg in $T_1$.

Reducing sugars were also detected 5.50% o 6.80% in the rang. In the $T_4$ 5.50% was minimum and 6.80% in $T_7$ maximum reducing sugar recorded.

Non-Reducing sugar was also detected 5.35 to 8.00 in the rang. In the $T_3$ 5.35% was minimum and 8.00% in $T_4$ maximum non – reducing sugar recorded.

Total sugar were also detected 11.90% to 13.80 in the range. In the $T_3$ 11.90% was minimum and 13.80% in $T_6$ maximum total sugar recorded.

The pectin was estimated in the terms of percent calcium pectate. 0.35% was recorded in $T_7$ followed by 0.30 % in $T_3$ & $T_6$, 0.25% in $T_2$ & $T_4$ and 0.20% in $T_1$ & $T_5$ respectively.

The tannin was estimated as gallotannic acid in the nectar. It was found between range of 0.10% to 0.28 % highest 0.28 % was recorded in $T_4$ where as 0.10 minimum in $T_1$.

The data represented in table no-4 and figure no- 4 are pertaining to chemical characteristics of kiwi fruit nectar a three period storage pH of the nectar was recorded in the range of 3.45 to 3.70 highest put value 3.70 was observed in $T_1$ while minimum value 3.45 was found in $T_4$.

Total soluble solids were found $14.40^0$B maximum in $T_3$ , where $14.70^0$B in minimum in $T_4$.

The Acidity was (as citric acid) found 0.30% maximum in $T_4$ where as 0.26 % minimum in $T_5$.

Ascorbic acid was estimated in the range of 4.55 to 26.40 mg/100 ml. In which maximum 26.40 mg ascorbic acid was found in $T_5$ where as 4.55 mg in $T_1$.

Reducing sugar were also detected 5.50 to 6.80 % in the range. In the $T_4$ 5.50 % was minimum and 6.80 % in $T_7$ maximum reducing sugar recorded.
Non- Reducing sugar were also detected 5.35 % to 8.00 % in the range. In the $T_3$ 5.35 % was minimum and 8.00 % in $T_4$ maximum non-reducing sugar recorded.

Total sugar were also detected 11.90 % to 13.80 % in the range. In the $T_3$ 11.90% was minimum and 13.80% in $T_6$ maximum total sugar recorded.

The pectin was estimated in the terms of percent calcium pectate 0.35% was record in $T_7$ followed by 0.20 in $T_1$ & $T_5$ , 0.25 % in $T_2$ & $T_4$ and 0.30 in $T_3$ & $T_6$ respectively.

The tannin was estimated as gallotannic acid in the nectar it was found between rang of 0.10 % to 0.28 % highest 0.28 % was recorded in $T_4$ where as 0.10 minimum in $T_1$

The data represented in table no-4 and figure no- 4 are pertaining to chemical characteristics of kiwi fruit nectar a six period storage pH of the nectar was recorded in the range of 3.40 to 3.50 highest pH value 3.50 was observed in $T_4$ & $T_7$ while minimum value 3.40 was found in $T_3$.

Total soluble solids were found $14.50^0$B maximum $T_3$ were $14.00^0$B minimum in $T_1$ & $T_4$ .
The acidity was detected 0.30% (as citric acid) found maximum in $T_1$ where as 0.25% minimum $T_5$.

Ascorbic acid was estimated in the range of 3.25 to 25.25 mg/ 100 ml. In which maximum 25.25 mg ascorbic acid was found in $T_5$ where as 3.25 $T_2$.

Reducing sugar were also detected 5.50% to 6.80 % in the range. In the $T_4$ 5.50 % was minimum and 6.80 % in $T_7$ maximum reducing sugar recorded .

Non- Reducing sugar were also detected 5.35 % to 8.00% in the range. In the $T_3$ 5.35 % was

minimum and 8.00% in $T_4$ maximum non-reducing sugar recorded.

Total sugar was also detected 11.90 % to in the range. In the $T_3$ 11.90 % was minimum and 13.80 % in $T_6$ maximum total sugar recorded.

The pectin was estimated in the terms of percent calcium pectin 0.25 % in was recorded in $T_3$, $T_6$ & $T_7$ followed by 0.20 % in $T_2$ & $T_4$ and 0.18 in $T_1$ & $T_5$ respectively.

The tannin was estimated as gallotannic acid in the nectar it was found between range of 0.10 to 0.28% highest 0.28 % was recorded in $T_4$ where 0.10 minimum in $T_1$.

**Discussion:**

Experimental findings during investigation are supported and accordance with earlier research workers are discussed as follows;

In this experiment Kiwi fruit used in preparation of ready to serve beverage similarly Vedehi, *et al.* (1977)[4] studied utilization of conventional fruit for RTS.

During storage period acidity was observed slight increasing trend this change in acidity during storage is also reported by Bhatia, *et. al.* (1956)[5]. Reducing sugars were found increasing trend during storage study it is due to conversion disaccharide in to more saccharides in result reducing sugars were increasing these results are in confirmally with observation made by Tiwari, *et al* . (2001)[6].

Data reveals that the pectin content showed decreasing trend in all storage periods it is due to degradation of pectin in to saccharides similar results were reported by guava fruit.

Vitamin C was found decreasing trend in all storage period since vitamin C is soluble in water and oxidation sensitive have been observed earlier by Simsev (2011)[7].

The initial acidly of kiwi fruit nectar showed increasing trend with increasing storage period as well which may be due to formation of various organic acids similar result was reported by Yadav, *et al.* (2010)[8].

Tired of decreasing pH and increasing acidity found in these studies are well supported by previous researchers Tandon, *et al.* (1983)[9], and Sandhu, et al. (2001)[10].

Colour was observed no more changing during storage of nectar because nectar was filled in glass bottles better retention of anthocyanin earlier observe by Khurdiya (1979)[11] in the guava juice in glass bottles than that of plastic containers. Storage temperature significantly in fluences the ascorbic acid retention in canned orange juice and concluded that higher the storage temperature lower the retention of ascorbic and Freed, *et al.* (1966)[12] also advocated a linear relationship between ascorbic acid and storage time.

In the kiwi fruit nectar increasing in reducing sugars were observed and there is slight and at par in all the samples. This may be assigned due to conversion of tannins into sugars acids and other compound due to hydrolysis. These findings are those agreements with Pallainiswamy, *et al.* (1974)[13].

The orgamoleptic evaluation of kiwi fruit nectar was conducted as per numerical score method described by Rangana (1986)[1].

On the basis of physico-chemical characteristic of kiwi fruit nectar during storage study no more changes were observed. Thus shelf life of nectar may increase more than six month.

**Table-1**
**PHYSICAL CHARACTERISTICS OF FRESH KIWI FRUIT**

| S.NO | CHARACTERS | AVERAGE VALUES |
|---|---|---|
| 1 | Length (Cm) | 6.32 |
| 2 | Diameter (Cm) | 9.50 |
| 3 | Weight (gm) | 85.10 |
| 5 | Specific Gravity | 0.952 |

| | | |
|---|---|---|
| 6 | Pulp % | 80 |
| 8 | Colour | Brown Bark greenish |
| 9 | Flavour | Pleasant |

**Table-2**
**CHEMICAL CHARAETERISTICS OF FRESH KIWI FRUIT**

| S.No. | Characters | Average Values |
|---|---|---|
| 1. | pH | 3.60 |
| 2. | T.S.S ($B^0$). | 14 |
| 3. | Acidity (%) | 0.45 |
| 4. | Ascorbic Acid (mg/100 gm) | 118.50 |
| 5. | Reducing Sugar (%) | 7.50 |
| 6. | Non-Reducing Sugar (%) | 6.45 |
| 7. | Total sugar % | 13.50 |
| 8. | Tannin (As gollotannic acid) | 0.20 |
| 9. | Pectin % (as calcium pectati ) | 0.45 |

**Table-3**

**CHEMICAL ANALYSIS OF NECTAR AT ZERO PREIOD**

| S. No | Treatment | pH | T.S.S. $^0B$ | Acidity (as citric acid) % | Ascorbic Acid (mg/100 gm) | Reducing Sugar % | Non-Reducing Sugar % | Total Sugar % | Pectin | Tannin Gallolmmic acid |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | $T_1$ | 3.75 | 15 | 0.25 | 4.60 | 6.50 | 7.10 | 13.60 | 0.20 | 0.10 |
| 2. | $T_2$ | 3.70 | 15 | 0.25 | 6.50 | 6.40 | 6.40 | 12.80 | 0.25 | 0.12 |
| 3. | $T_3$ | 3.65 | 15 | 0.25 | 10.60 | 6.55 | 5.35 | 11.90 | 0.30 | 0.15 |
| 4. | $T_4$ | 3.50 | 15 | 0.25 | 14.50 | 5.50 | 8.00 | 13.50 | 0.25 | 0.28 |
| 5. | $T_5$ | 3.55 | 15 | 0.25 | 27.40 | 5.75 | 6.65 | 12.40 | 0.20 | 0.15 |
| 6. | $T_6$ | 3.60 | 15 | 0.25 | 20.50 | 6.75 | 7.05 | 13.80 | 0.30 | 0.16 |
| 7. | $T_7$ | 3.65 | 15 | 0.25 | 25.60 | 6.80 | 6.70 | 13.50 | 0.35 | 0.18 |

**Figure no- 3**

**BAR DIAGRAM SHOURING CHEMICAL CHARAETERISTIS OF NECTAR Zero PERIOD**

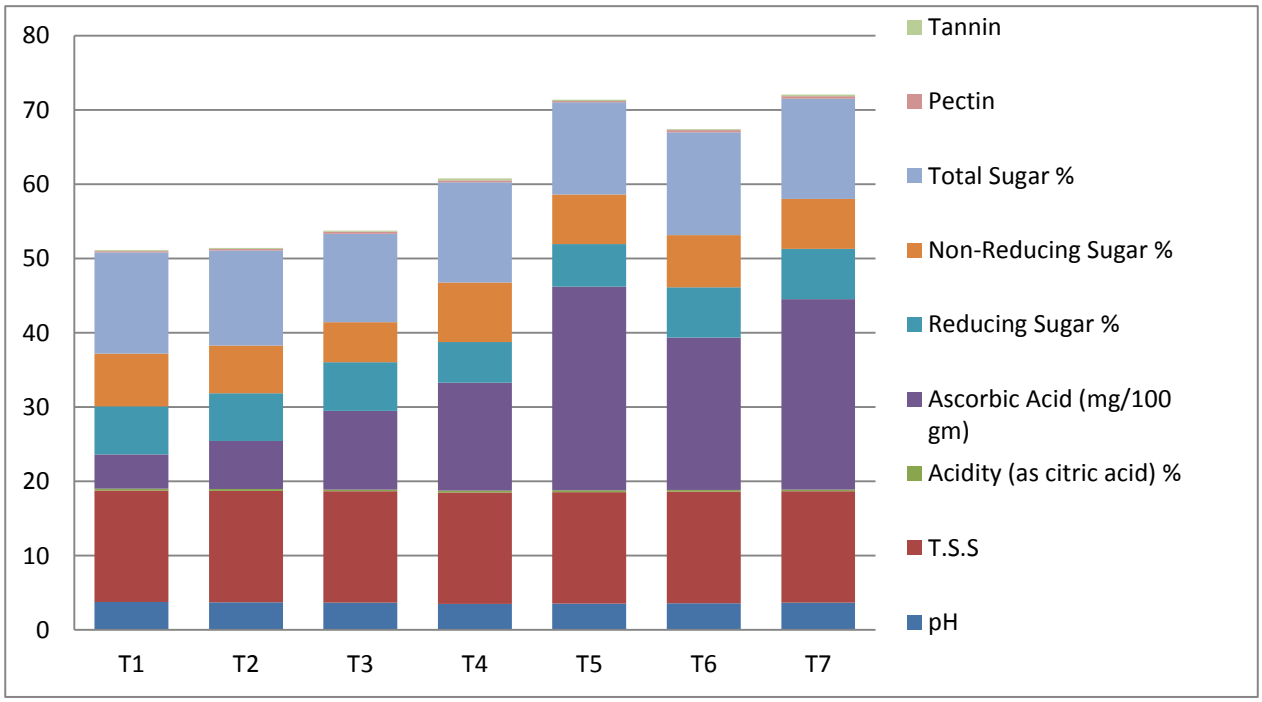



**Table-4**

**CHEMICAL ANALYSIS OF NECTAR AFTER THREE MONTHS STORAGE**

| S.No | Treatment | pH | T.S.S $^0$B | Acidity (as citric acid) % | Ascorbic Acid (mg/100 gm) | Reducing Sugar % | Non-Reducing Sugar % | Total Sugar % | Pectin | Tannin Gallolmmic acid |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | $T_1$ | 3.70 | 14.50 | 0.28 | 4.55 | 6.50 | 7.10 | 13.60 | 0.20 | 0.10 |
| 2 | $T_2$ | 3.55 | 14.50 | 0.27 | 5.45 | 6.40 | 6.40 | 12.80 | 0.25 | 0.12 |
| 3 | $T_3$ | 3.60 | 14.40 | 0.29 | 9.40 | 6.55 | 5.35 | 11.90 | 0.30 | 0.15 |
| 4 | $T_4$ | 3.45 | 14.70 | 0.30 | 13.55 | 5.50 | 8.00 | 13.50 | 0.25 | 0.28 |
| 5 | $T_5$ | 3.50 | 14.50 | 0.26 | 26.40 | 5.75 | 6.65 | 12.40 | 0.20 | 0.15 |
| 6 | $T_6$ | 3.55 | 14.55 | 0.27 | 20.50 | 6.75 | 7.05 | 13.80 | 0.30 | 0.16 |
| 7 | $T_7$ | 3.60 | 14.60 | 0.29 | 25.60 | 6.80 | 6.05 | 13.50 | 0.35 | 0.18 |

**Figure no - 4**

**BAR DIAGRAM SHOURING CHEMICAL CHARAETERISTIS OF NECTAR THREE PERIOD**

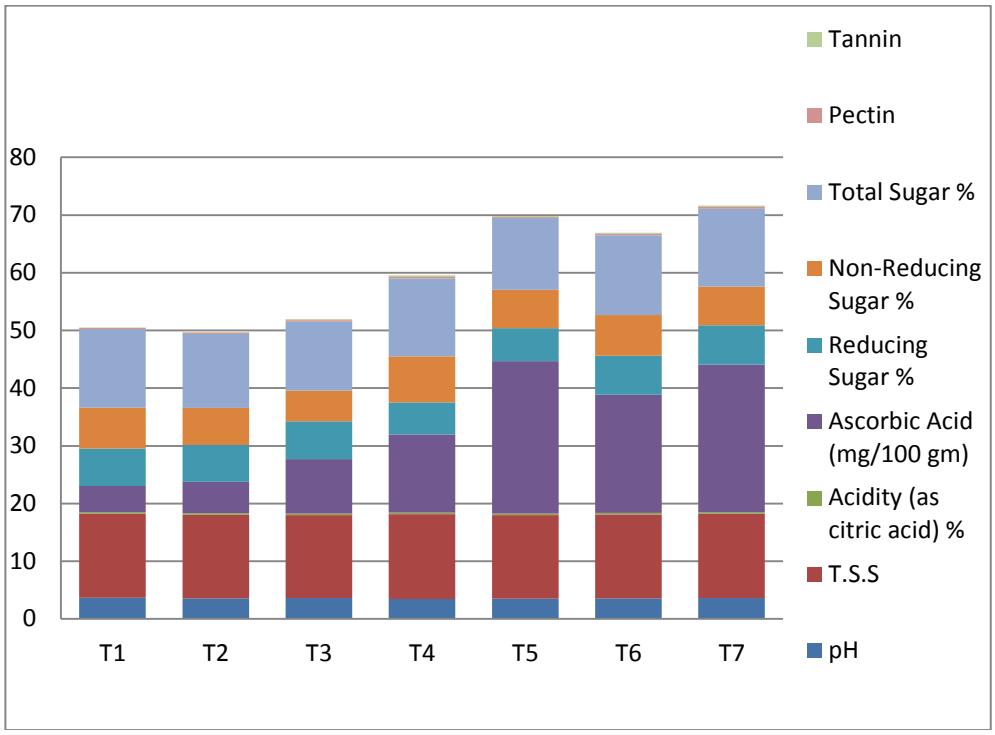



**Table-5**

**CHEMICAL ANALYSIS OF NECTAR sat SIX MONTH**

| S.No | Treatment | pH | T.S.S $^0$B | Acidity (ascitric acid) % | Ascorbic Acid (mg/100 gm) | Reducing Sugar % | Non-Reducing Sugar % | Total Sugar % | Pectin as calcium pectin | Tannin Gallolmmic acid |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | $T_1$ | 3.50 | 14.00 | 0.30 | 3.45 | 6.50 | 7.10 | 13.60 | 0.18 | 0.10 |
| 2. | $T_2$ | 3.45 | 14.20 | 0.31 | 3.25 | 6.40 | 6.40 | 12.80 | 0.20 | 0.12 |
| 3. | $T_3$ | 3.40 | 14.50 | 0.29 | 8.10 | 6.55 | 5.35 | 11.90 | 0.25 | 0.15 |
| 4. | $T_4$ | 3.50 | 14.00 | 0.28 | 10.20 | 5.50 | 8.00 | 13.50 | 0.20 | 0.28 |
| 5. | $T_5$ | 3.45 | 14.10 | 0.32 | 25.25 | 5.75 | 7.65 | 12.40 | 0.18 | 0.15 |
| 6. | $T_6$ | 3.40 | 14.20 | 0.32 | 18.30 | 6.75 | 7.05 | 13.80 | 0.25 | 0.16 |
| 7. | $T_7$ | 3.50 | 14.30 | 0.25 | 22.25 | 6.80 | 6.70 | 13.50 | 0.25 | 0.18 |

**Figure no -5**

**BAR DIAGRAM SHOwING CHEMICAL CHARAETERISTIS OF NECTAR at SIX month PERIOD**

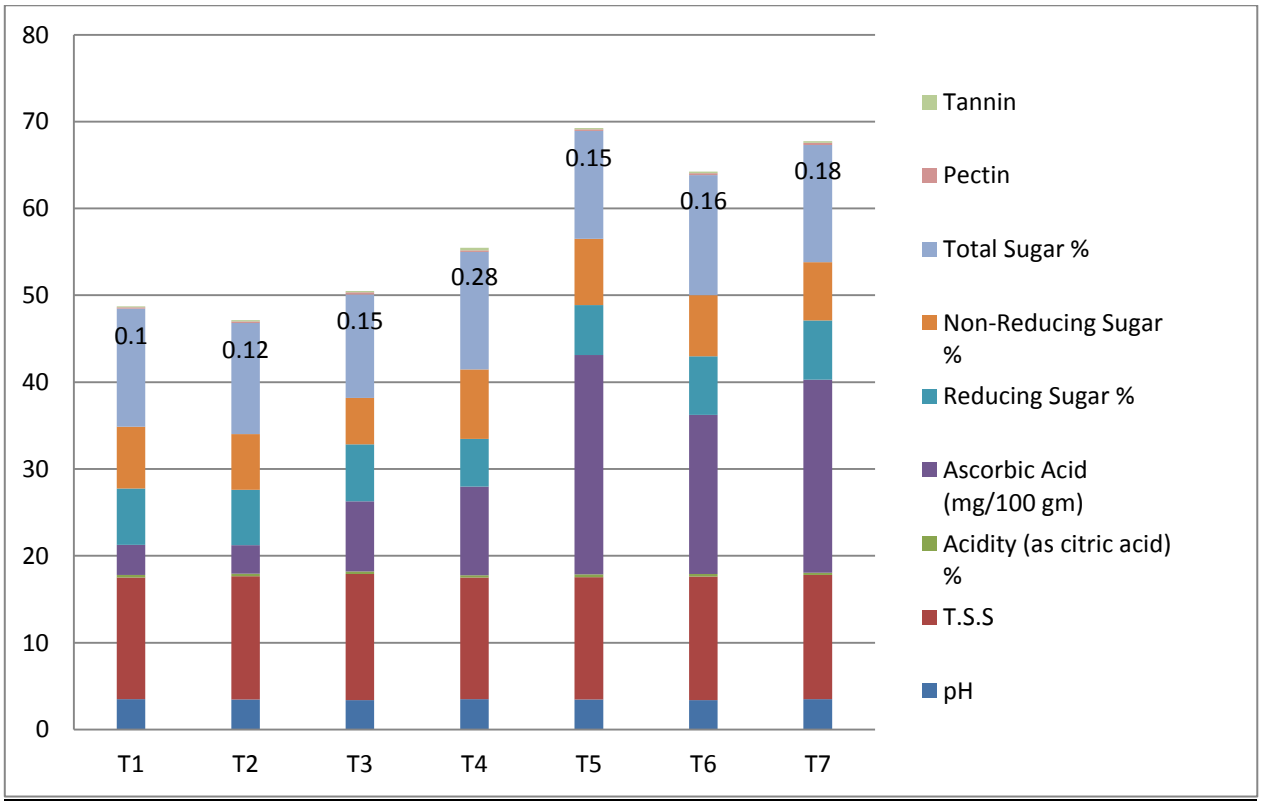



**Table No- 6**

**Organoleptic Evaluation of nectar at Zero Period**

| TREATMENT | COLOUR | FLAVOUR | CONSISTENCY | TASTE | TOTAL |
|---|---|---|---|---|---|
| | 25 | 25 | 25 | 25 | |
| $T_1$ | 18.40 | 19.00 | 20.00 | 20.20 | 77.60 |
| $T_2$ | 21.00 | 21.00 | 21.00 | 21.40 | 84.4 |
| $T_3$ | 20.00 | 20.00 | 20.60 | 20.80 | 81.4 |
| $T_4$ | 22.80 | 21.80 | 22.40 | 22.20 | 89.2 |
| $T_5$ | 21.40 | 20.60 | 19.80 | 20.40 | 82.2 |
| $T_6$ | 19.60 | 19.00 | 19.60 | 20.60 | 78.80 |
| $T_7$ | 20.40 | 20.60 | 20.80 | 21.00 | 82.8 |

**Figure No- 6**

**Organoleptic Evaluation of nectar at Zero Period**

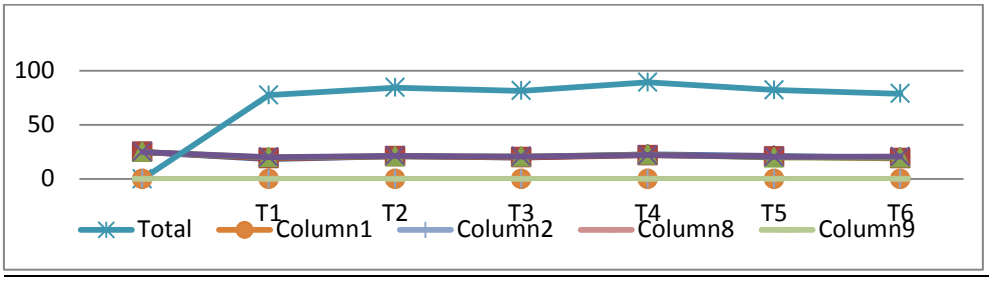



**Table No – 7**
**Oraganoleptic Evaluation of Nectar at Three Months**

| TREATMENT | COLOUR | FLAVOUR | CONSISTENCY | TASTE | TOTAL |
|---|---|---|---|---|---|
| | 25 | 25 | 25 | 25 | |
| $T_1$ | 18.22 | 18.50 | 19.50 | 19.50 | 75.72 |
| $T_2$ | 20.00 | 20.50 | 20.50 | 21.20 | 82.20 |
| $T_3$ | 19.50 | 19.55 | 20.45 | 21.30 | 80.80 |
| $T_4$ | 22.50 | 21.40 | 22.35 | 20.75 | 87.00 |
| $T_5$ | 21.10 | 20.45 | 19.60 | 22.10 | 83.25 |
| $T_6$ | 19.45 | 18.50 | 18.50 | 20.45 | 76.90 |
| $T_7$ | 20.10 | 20.50 | 20.65 | 20.50 | 81.75 |

**Figure No – 7**
**Oraganoleptic Evaluation of Nectar at Three Months**


**Table No – 8**
**Organoleptic Evaluation of Nectar at Six months**

| TREATMENT | COLOUR | FLAVOUR | CONSISTENCY | TASTE | TOTAL |
|---|---|---|---|---|---|
| | 25 | 25 | 25 | 25 | |
| $T_1$ | 17.22 | 18.45 | 19.45 | 18.55 | 73.67 |
| $T_2$ | 19.00 | 20.35 | 20.35 | 20.22 | 79.92 |
| $T_3$ | 18.50 | 19.20 | 20.45 | 21.55 | 79.70 |
| $T_4$ | 21.50 | 21.30 | 21.55 | 20.45 | 84.80 |

| | | | | | |
|---|---|---|---|---|---|
| $T_5$ | 20.10 | 20.20 | 19.78 | 19.55 | 79.63 |
| $T_6$ | 19.30 | 18.55 | 18.35 | 20.35 | 76.55 |
| $T_7$ | 19.10 | 20.45 | 20.55 | 20.25 | 80.35 |

**Figure No - 8**
**Organoleptic Evaluation of Nectar at Six months**

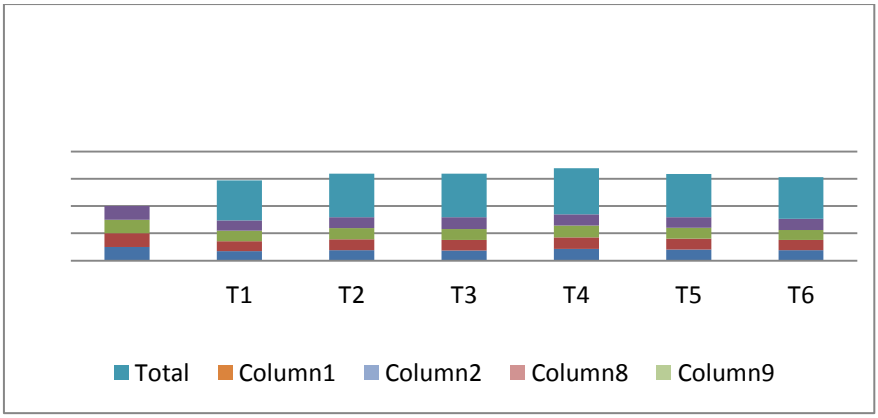


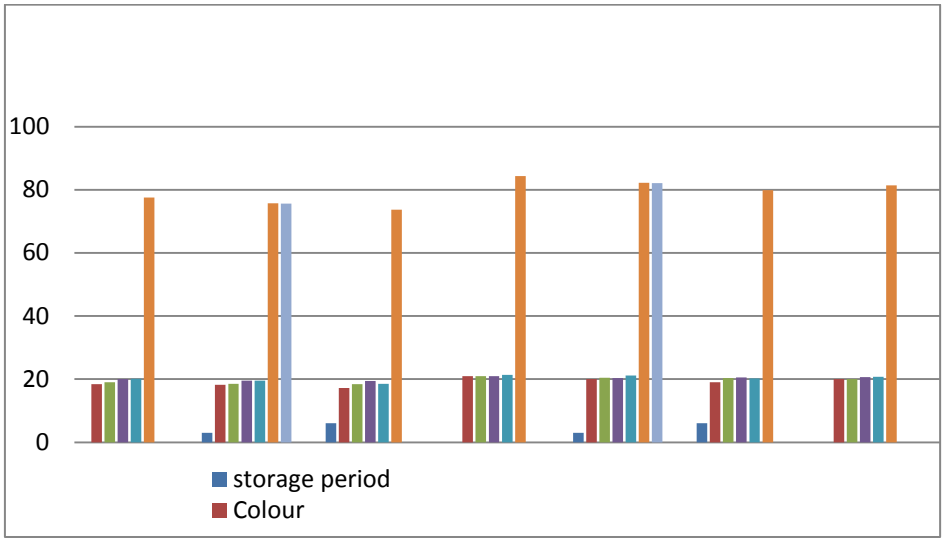

**Table-9**

**Organoleptic evaluation mean score of nectar during 0, 3 and 6 month storage period**

| Sl. No. | Treatment | Storage Period | Colour | Flavour | Consistency | Taste | Total | Average of 3 Storage Period | Order of Merit |
|---|---|---|---|---|---|---|---|---|---|
| 1. | $T_1$ | 0 | 18.40 | 19.00 | 20.00 | 20.20 | 77.60 | 75.66 | 7th |
| | | 3 | 18.22 | 18.59 | 19.50 | 19.50 | 75.72 | | |
| | | 6 | 17.22 | 18.45 | 19.45 | 18.55 | 73.67 | | |
| 2. | $T_2$ | 0 | 21.00 | 21.00 | 21.00 | 21.40 | 84.40 | 82.17 | 2th |
| | | 3 | 20.00 | 20.50 | 20.50 | 21.20 | 82.20 | | |
| | | 6 | 19.00 | 20.35 | 20.35 | 20.22 | 79.92 | | |
| 3. | $T_3$ | 0 | 20.00 | 20.00 | 20.60 | 20.80 | 81.40 | 80.63 | 4rd |
| | | 3 | 19.50 | 19.55 | 20.45 | 21.30 | 80.80 | | |
| | | 6 | 18.50 | 19.20 | 20.45 | 21.55 | 79.70 | | |
| 4. | $T_4$ | 0 | 22.80 | 21.80 | 22.40 | 22.20 | 89.20 | 87.00 | 1st |
| | | 3 | 22.50 | 21.40 | 22.35 | 20.75 | 87.00 | | |
| | | 6 | 21.50 | 21.30 | 21.55 | 20.45 | 84.80 | | |
| 5. | $T_5$ | 0 | 21.40 | 20.60 | 19.80 | 20.40 | 82.20 | 81.69 | 3th |
| | | 3 | 21.10 | 20.45 | 19.60 | 20.10 | 83.25 | | |
| | | 6 | 20.10 | 20.20 | 18.78 | 19.55 | 79.63 | | |
| 6. | $T_6$ | 0 | 19.60 | 19.00 | 19.60 | 20.60 | 78.80 | 77.45 | 6nd |
| | | 3 | 19.45 | 18.50 | 18.50 | 20.45 | 76.90 | | |
| | | 6 | 19.30 | 18.55 | 18.35 | 20.35 | 76.55 | | |
| 7. | $T_7$ | 0 | 20.40 | 20.60 | 20.80 | 21.00 | 82.80 | 81.63 | 5th |
| | | 3 | 20.10 | 20.50 | 20.65 | 20.50 | 81.75 | | |
| | | 6 | 19.10 | 20.45 | 20.55 | 20.25 | 80.35 | | |

**Figure No -9**

**Organoleptic evaluation mean score of nectar during 0,3 and 6 month storage period**




**Conclusion:**

Data of studies showed that kiwi fruit is rich in ascorbic acid which was retained enormous at every storage period. Reducing sugars were in erased during storage study. Nectar also retained kiwi fruit pulp colour up to six month no major change was noticed RTS was sensory evaluated at each stage of storage period was found fit for consumption confirming quality attributes. Hence organoleptically kiwi fruit nectar was got order of acceptance $T_4>T_6>T_3>T_7>T_1>T_2>T_5$.

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