EVALUATION OF SENSORY QUALITIES AND NUTRITIONAL ABILITIES OF GUAVA RTS (READY TO SERVE) BEVERAGE ADDED WITH BETEL LEAVES AND MINT LEAVES.

Rushi Panajkar[1], Kapil Ubharhande[2], Sakshi Bang[3]

[1,2,3]Sau Vasudhatai Deshmukh College Of Food Technology, Amravati, India

Abstract:

RTS was prepared by using guava pulp, mint leaves and betel leaves by mixing them together in desired proportion. This cause the positive increase in the nutritional value of guava RTS. The percentage of 'Vitamin C' which one is essential for daily body needs provided with the cooling and digestive agents like mint and betel leaves respectively. Sensory evaluation of the appearance, colour, texture and flavour of the more successful types of RTS compared favourably with the normal guava RTS.

Keywords: Guava, Betel leaves, RTS, Vitamin C

1] Introduction:

Guava is the basic ingredient while making juice or ready to serve product which is mainly found in Uttar Pradesh, Madhya Pradesh and some parts of South India [1]. It fulfils our daily requirement of vitamin C and "Vitamin B9" [2].It also helps in DNA repair and synthesis. It also contain large amount of carbohydrate. RTS made by guava is very convenient to use, easily transferable and cheaply available. Mint is added as freshener [3]. Mint has cooling and gastro stimulant property [3]. That is why mint is used in pharmaceuticals. Betel leaves have ability to smoothen the process of digestion. Hence they are used in the RTS.

Guava also contains Calories, Potassium, and Sodium, Vitamins, Iron and Dietary fibers which are essential for body health. It is also used as an antioxidant so it does not require more amount of preservative.

2] Materials and Method:

Pulps and Juices:

The RTS was prepared in plot plant of 'Sau.

Vasudhatai Deshmukh College of Food Technology, Amravati'. Fresh guava and mint, betel leaves were purchased from market of Amravati. Guava gets crushed and both the leaves get boils in mineral water. The guava is used for rich vitamin C source. Other food grade ingredients such as water, sugar, salt, etc. were added as per recipe.

Preparation of RTS:

The RTS was prepared by using guava, betel and mint leaves in a desired proportion. We initiate the preparation by grading the proper sized guava. We washed, peeled and cut the guava in required size. After extraction of pulp, sugar is added. Water, mint leaves and betel leaves were added in a fixed proportion. Also we added preservative 'Sodium Benzoate' with respect to sample batch.

C. Sensory Evaluation:

A 5 member panel evaluated for RTS to determine colour, texture, appearance, flavour. All the panellist were asked to indicate preference on 9 point" Hedonic Scale" and also to rank RTS in order to overall preference. The sensory properties of RTS were measured using 9 point hedonic scale method.

D. Proximate Analysis:

Proximate analysis is carried out by standard AOAC (1997) method [6] for all samples including control. Protein, iron, curd fibre, moisture and ash were evaluated. Proximate analysis is carried out by standard AOAC (1997) method [6] for all samples including control. Fats, protein iron, calorie were evaluated.

· Fat:

As compared to control sample the fat, percentage gets reduced by 1% in the selected

sample which gets 2.9% per 100gm.

· Vitamin C:

Control sample contains 15.2% of vitamin C but selected sample have higher percentage of vitamin C which is 19.1%.

· Carbohydrate:

Carbohydrate percentage also gets increased up to 1.2% and gets 6.0% per 100gm.

· Protein:

Selected sample contain 3.4 mg of protein per 100 gm.

· Calorie:

Calorie content in the selected sample is 68.6%.

3] Results and Discussion:

A] Sensory Evaluation:

The selection of the sample was done on the basis of sensory evaluation; factors like appearance, colour, texture, flavour are 7.2, 8.9, 7.9, and 8.0 respectively for required sample. These are 6.8, 5.9, 7.0, and 6.8 respectively for the control sample.

Table 1

| Sample	A	B	C
Attribute			
Appearance	7.2	7.0	6.8
Colour	8.9	6.9	5.9
Texture	7.9	7.8	7.0
Flavour	8.0	7.6	6.8
Overall Acceptability	8.0	7.3	6.6

From the above table we can clearly observe that the selected required sample is superior to the control sample as the nutritional quality increases.

B] Proximate analysis:

Proximate analysis of overall acceptability and control sample was carried out and result obtained is presented in table 2. Initially the control sample contain 15.2% vitamin C. The quantity of vitamin C is increased up to 19.1% in the required sample. Our main constituent Vitamin C is increased by 3.4%. Also protein content was increased by 2.3%, initially it was 1.2% and then it rises up to 3.4%. Carbohydrates increased up to 1.2%. Since the control sample

has 6.8% of carbohydrate and required sample has 6.0% protein.

Particular	C (%)	A (%)
Fats	2.70	2.90
Vitamin C	15.20	19.10
Protein	1.20	3.40
Carbohydrates	4.80	6.00
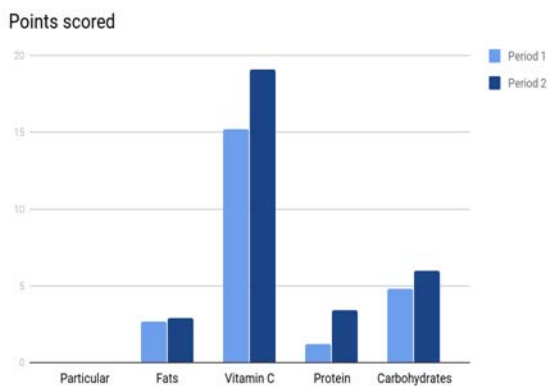
4] Conclusion:

The digestive and cooling ability of RTS gets increased due to presence of antioxidants less amount of preservative is required.so, the manufacturing process gets decreased, health related issues such as digestion and vitamin C related diseases can be cured after consumption of this RTS beverage.

5] References:-

(1) G. S. Siddap and G. L. Tandon, Girdhari Lal; Preservation of Fruits and Vegetables.

(2) R.C. Bhutani; Fruits and Vegetable Preservation.

(3) Dr. K.L. Chadha, Handbook of Horticulture.

(4) Ranganna S., 1999, Handbook of Analysis for Fruits and Vegetable Product. (For Hedonic Scale method.

(5) AOAC, 1997, Official method of analysis (16th edition). Washington DC: Association of Official Analytical Chemists.

(6) National Institution of, 2011, Dietary Guidelines for Indian (2nd Edition). Hyderabad, India.