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## Sensory evolution of Kandi Peda sold in Satara city

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### Abstract

The Present Investigation entitled “Quality Analysis of Kandi Peda Sold in Satara City” was undertaken during the year 2020-2021. The objective of present investigation was to study the physico-chemical quality, to study sensory evaluation and to know the sale price of paneer sold in Satara city.

In all 75 samples of Kandi Peda were examined during the course of investigation which were collected from different regions viz., central, east, west, north and south region. From each region, 15 samples were collected and analysed during three fortnight. So, 5 samples of each regions were analysed each fortnight. These Kandi Peda samples were collected by adopting stratified randomization technique.

It was reported that, the overall acceptability score of central, east, west, north, south regions Kandi Peda were as 7.46, 7.96, 7.70, 8.39, and 7.51, respectively. Higher score was observed in north region Kandi Peda. From this result it was showed that sensory quality of north region Kandi Peda was good than central, East, West, South region Kandi Peda.

**Keywords:** Milk, milk product, Kandi Peda, sensory evolution

### Introduction

Milk is an almost ideal food. It has high nutritive value. It supplies body-building protein, bone formation minerals and health giving vitamins and furnishes energy giving lactose and milk fat. Beside, supplying certain essential fatty acid, it contains the above nutrients in an easily digestible and assimilated form. All these properties make milk an important food for pregnant mother, growing children, adolescents, adults, invalids, convalescents and patients alike. A single glass of milk is loaded with 15 essential vitamins and nutrients it contain as much as protein as an egg, as many as carbohydrate as a quarter cup of rice and the same calcium as 16 cup of spinach.

Peda is a popular indigenous, khoa based, heat desiccated milk product, which is prepared from cow milk, buffalo milk or a combination. It has been reported that the quantity of Peda produced in India exceeds than any other indigenous khoa based sweets (Mahadevan, 1991). Peda is one of the important milk product in the market, because it is liked by all classes of people. It has an economic importance especially in rural parts of India, as it provides good means of utilizing small quantity of surplus milk. Peda has special importance in various celebrations like inaugural functions, to celebrate success in examinations, wedding etc. The Indian people mostly offer Peda to God as a prasad, Therefore, the demand for this product is constant throughout the year.

As Peda contains almost all milk solids in addition with sugar and other additives, it is highly nutritious. It is prepared by heating a mixture of khoa and sugar until the desired granular and hard texture and good flavour develops. Several varieties of Peda are famous in India with their typical characteristics. In Uttar Pradesh, Mathura Peda is famous. Certain other varieties of Peda like Elaichi Peda, Malai Peda, Keshar Peda, Rajkot Peda etc. are also found in the markets of different parts of the India. In Maharashtra state certain brands of Peda are famous. Few examples are Chitale Peda, Kaka Halwai Peda, Ghodake Peda from Pune city, Kandi Peda from Satara is famous for its brown colour and caramelized flavour. In Ahmednagar district, Rajur Peda, Mahendra Peda are famous. This indicates that there are different types of Peda are available in the market. All the types of Peda have distinct characteristics and method of manufacture vary from region to region.

### Material and Methods

The present investigation on evaluating sensory qualities of Kandi Peda samples were carried out in the laboratory of Animal Husbandry and Dairying Science, College of Agriculture Nagpur.

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The study includes the preliminary survey of sample Kandi Peda sold in Satara city, the samples of market Kandi Peda were collected from different regions viz., central, east, west, north and south regions of Satara city. These Kandi Peda samples were subjected to comparison in respect of sensory evaluation.

Sensory evaluation of Kandi Peda was carried out by a panel of judges so as to grade the product and to know the acceptability. It was judged for colour and appearance, flavour, taste, body and texture and overall acceptability attributes. Score cards were provided to the judges comprising "9 point Hedonic scale" developed by Nelson and Trout (1964) [2].

**The specimen evaluation card is as under**

Sensory evaluation of Kandi Peda (9-point Hedonic Scale)

Name of Judge-

Designation

Date Time

Treatments	Colour and appearance	Flavour	Body and texture	Overall acceptability
Central (T <sub>1</sub> )				
East (T <sub>2</sub> )				
West (T <sub>3</sub> )				
North (T <sub>5</sub> )				
South (T <sub>5</sub> )				

**Signature**

The numerical values of the score card are as under

**Table 1:** Colour and appearance score (out of 9.0)

Regions	Colour and appearance score			Average
Central	7.20	7.40	7.10	7.23
East	8.33	8.00	7.48	7.93
West	7.67	8.00	7.50	7.72
North	8.00	8.37	8.67	8.34
South	7.63	8.00	8.00	7.87
SE(M)				0.09
C.D				0.56
C.V				0.38
Result				Sig.

Values with different superscripts differ significantly ( $p < 0.05$ ).

From the Table 1 it was clear that the mean score for colour and Appearance for central, East, West, North and south peda was 7.23, 7.93, 7.72, 8.34 and 8.87, respectively. The non-significant difference were observed in between the treatment, east and west Kandi Peda. The significant difference were observed in between the treatment west and north Kandi Peda.

The result recorded in present investigation for colour and appearance score were comparable with findings of above mentioned research workers.

**2. Flavour**

The flavour of any food product is the most important attributes as far as consumers liking is concerned and peda is not an exception to it. Table 2 shows the mean sensory score for flavour of Kandi Peda.

The score obtained flavour of Kandi Peda are presented in Table 2.

Sr. No.	Particular	Score
1	Extremely like	9
2	Like very much	8
3	Like moderately	7
4	Like slightly	6
5	Neither likes nor unlike	5
6	Unlike slightly	4
7	Unlike moderately	3
8	Unlike very much	2
9	Extremely unlike	1

The score of various treatments in respect of colour and appearance, flavour, taste body and texture, and overall acceptability was worked out. The data were analysed using Completely Randomized Block Design (CRBD)

**Result and Discussion**

Kandi Peda were judged for its sensory attributes such as colour and appearance, flavour, body and texture by a panel of judges using 9 point Hedonic Scale. The numerical score given by judges for individual quality attributes were computed to get the mean and these means were then subjected to the statistical analysis.

The result obtained for sensory qualities of Kandi Peda are discussed as under.

**1. Colour and appearance**

The score obtained for colour and appearance of Kandi Peda are presented in Table 1.

**Table 2:** Flavour score (out of 9.0)

Regions	Flavour score			Average
	I	II	III	
Central	7.50	7.60	7.10	7.40
East	8.00	8.19	7.89	8.02
West	8.10	8.00	8.50	8.20
North	8.50	8.98	9.00	8.82
South	7.67	7.90	8.23	7.93
SE(M)				0.06
C.D				0.48
C.V				3.18
Result				Sig.

Values with different superscripts differ significantly ( $p < 0.05$ ).

It was observed from Table 2 that the treatment score of flavour for central, east, west, north and south Kandi Peda were 7.40, 8.02, 8.20, 8.82 and 7.93 respectively. The highest flavour score was recorded in north Kandi Peda followed by west, east, south and Kandi Peda. The critical difference (CD) was calculated and treatment differences

were tested at 5% level of significance. Treatment north Kandi Peda (8.82) was significantly superior over rest of the treatment. The result recorded in present investigation for body and texture score were comparable with findings of below mentioned research workers.

### 3. Body and texture

The score obtained body and texture of Kandi Peda are presented in Table 3.

**Table 3:** Body and texture score (out of 9.0)

Regions	Colour and appearance score			Average
Central	7.50	8.00	7.10	7.53
East	8.13	8.03	7.67	7.94
West	7.80	8.00	8.50	8.10
North	8.00	9.00	8.00	8.33
South	7.80	8.44	8.62	8.28
SE(M)				0.16
C.D				—
C.V				4.99
Result				Not Sig.

Values with different superscripts differ significantly ( $p < 0.05$ ).

The body and texture is the main parameter as far as the consumer appeal is concerned. It was observed that the mean body and texture score of Kandi Peda for the treatments central, east, west, north and south Kandi Peda was 7.53, 7.94, 8.10, 8.33 and 8.28, respectively. Highest score 8.33 was observed for south Kandi Peda while lowest for central Kandi Peda (7.53).

It was observed that, too low moisture in Peda adversely affected the body, while medium Sugar and higher moisture and fat produced Peda with excellent body and texture.

Less moisture in Peda resulted in harder body and rough texture. At lowest moisture level when sugar was increased body became little softer, probably due to lowering of protein content.

The result recorded in present investigation for body and texture score were comparable with findings of below mentioned research workers.

### 4. Overall acceptability

The score obtained overall acceptability of Kandi Peda are presented in Table 4.

**Table 4:** overall acceptability score (Out of 9.0)

Regions	Overall acceptability score			Average
Central	7.50	7.43	7.45	7.46
East	7.89	7.98	8.02	7.96
West	7.65	7.70	7.77	7.70
North	8.45	8.33	8.40	8.39
South	7.42	7.55	7.58	7.51
SE(M)				0.004
C.D				0.11
C.V				0.78
Result				Sig.

Values with different superscripts differ significantly ( $p < 0.05$ ).

It was observed from above Table 4 that the overall acceptability of Kandi Peda for various treatments varied in between 7.46 to 8.39. The mean score for central, east, west, north and south was 7.46, 7.96, 7.70, 8.39 and 7.51 respectively. The non-significant difference were

observed in between the treatment central, south Peda and east, west Kandi Peda.

The high score for overall acceptability was observed in north Kandi Peda and lowest score was recorded in Kandi Peda from central region. East, west, south Kandi Peda ranked between like moderately to like very much.

The result recorded in present investigation for overall acceptability score were comparable with findings of below mentioned research workers.

### Conclusions

Out of 75 samples from five different regions of Satara city, north region Kandi Peda was found good in respect as sensory quality compare to central, east, west and south regions Kandi Peda in Satara city.

The present study suggested that, there is need to conduct frequent quality check on this product, which avoid pre and post contamination and thereby, helps to protect the consumer's interest from health point of view.

### References

1. Mahadeven AP. Nutritive value of traditional milk products. Indian Dairyman. 1991;43(2):95-99.
2. Nelson and Trout; c1964.