

Standardization of Gujarati sweets recipes and assessment of their nutritive values

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■ **ABSTRACT :** In ancient times man was consuming raw foods. With the search of fire he started cooking foods. As the time passed with the evolution of modern technology various kinds of processed foods are now available. In general, Gujarati food pattern is almost a balanced food. Presently, nutritive values of foods are generally derived from food tables, which are based on raw foods. It has been established that there is a definite loss of nutritive values especially vitamins and minerals due to cooking procedures. This study contained of a survey work of various food preparations daily consumed by various families residing in Saurashtra. This will highlight the food pattern of this region. A standard recipe was derived for all food preparations of people of Saurashtra region based on the results of the survey, which then was prepared in laboratory and analysed for different nutrient contents. Recipes which were commonly included in Gujarati sweets. It can be revealed from Table 1 that, Shira contains good amount of moisture compare to other cereal products of sweets. Protein was found to be considerably high in *Gol papdi* compare to *Laddu* because in *Gol papdi* Jaggery was used and in *Laddu* there was used a powder sugar. Fat content of *Laddu* and *Gol papdi* is very much high and contains low fat. Carbohydrates content of comparatively high because there is low fat content. Because of the high fat content of *Laddu* and *Gol papdi* these products were found to be high in energy level compare to other products. Carotene level was also found high in *Laddu* and comparative to *Gol papdi* and Shira because there was use of both (oil and *Ghee*) in *Laddu* and *Gol papdi* because there was use of Jaggery and was lowest in Semolina Shira because semolina contents low Iron compare to wheat. Ash was found to be highest in *Gol papdi* and lowest in Semolina Shira.

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In ancient times man was consuming raw foods. With the search of fire he started cooking foods. As the time passed with the evolution of modern technology various kinds of processed foods are now available. In general, Gujarati food pattern is almost a balanced food.

Presently, nutritive values of foods are generally derived from food tables, which are based on raw foods. It has been established that there is a definite loss of nutritive values especially vitamins and minerals due to cooking procedures. References show some scattered efforts

for finding out nutritive value of cooked foods. The researcher feels need for some concrete efforts for finding out nutritive values of cooked foods consumed commonly in Saurashtra region- a western part of Gujarat State.

History of cooking of foods:

There is, as yet, no clear evidence as to when cooking was invented. Literature shows that, cooking was invented as far back as 1.8 million to 2.3 million years ago. Other researchers believe that cooking was invented as late as 40,000 or 10,000 years ago. Evidence of fire is inconclusive as wildfires started by lightning-strikes are still common in East Africa and other wild areas, and it is difficult to determine as to when fire was used for cooking, as opposed to just being used for warmth or for keeping predators away. Most anthropologists contend that cooking fires began in earnest barely 250,000 years ago, when ancient hearths, earth ovens, burnt animal bones, and flint appear across Europe and the Middle East. Back 2 million years ago, the only sign of fire is burnt earth with human remains, which most anthropologists consider coincidence rather than evidence of intentional fire.

Meaning of cooking:

Cooking is the process of preparing food by applying heat selecting, measuring and combining of ingredients in an ordered procedure for producing safe and edible food. The process encompasses a vast range of methods, tools and combinations of ingredients to alter the flavor, appearance, texture, or digestibility of food. Factors affecting the final outcome include the variability of ingredients, ambient conditions, tools and the skill of the individual doing the actual cooking. The diversity of cooking worldwide is a reflection of the aesthetic, agricultural, economic, cultural, social and religious diversity throughout the nations, races, creeds and tribes across the globe.

Applying heat to a food usually, though not always, chemically transforms it, thus changing its flavor, texture, consistency, appearance, and nutritional properties. Methods of cooking that involve the boiling of liquid in a receptacle have been practiced at least since the 10th millennium BC, with the introduction of pottery

■ RESEARCH METHODS

This study contained of a survey work of various

food preparations daily consumed by various families residing in Saurashtra. This will highlight the food pattern of this region. A standard recipe was derived for all food preparations of people of Saurashtra region based on the results of the survey, which then was prepared in laboratory and analysed for different nutrient contents. recipes which were commonly included in Gujrati thali particularly in Saurashtra region meals were selected for the study. The recipes selected were main meal items, snacks and sweets which were generally consume through out the day and at special occasions like festivals and other celebrations. The recipes also were selected in such way that involved different kinds of cooking methods like boiling, steaming, shallow frying, deep frying, pressure cooking, roasting, fermentation and germination. The recipes included foods from almost all food groups like, cereals, pulses, vegetables (leafy vegetable, roots and tubers and other vegetables) milk, nuts and oils and also combination of these. A questionnaire was designed which was than filled up by housewives of middle income groups. This questionnaire contents name of products, ingredients and amounts, utensils and equipment's used, method of preparation and cooking time upto doneness for each product. The questionnaires were then given to the middle income groups families of urban (45 families), semi urban (45 families) and rural areas (45 families) of all the seven district of Saurashtra region. A set of classified recipes had been filled up from middle income group families by personal visits and an interview method. The families were selected in such a way that they were natives of that particular district/Taluka/village, respectively. The forms were distributed randomly among different caste people, who were originally vegetarians. After filling up the questionnaire data gathered were tabulated for ingredients amount and cooking method. At that particular time for getting a standardized recipes those forms which were having very different ingredients/ amount / cooking procedures were excluded for getting a generalized standard recipes, because extremely different recipes, if included, would have given a different amounts and ingredients of that particular recipes, than most of the people in Saurashtra were consuming.

- Total carbohydrates by Anthrone Method (Sadasivam and Manickam, 1991)
- Estimation of Oil (Sadasivam and Manickam, 1991)

- Nitrogen Analysis by Micro-Kjeldahl Method (Oser, 1976).

■ RESEARCH FINDINGS AND DISCUSSION

This chapter contains standardized recipes and their nutritive values by chemical analysis. After getting a data the standardized recipes was prepared in laboratory

Semolina Shira:

Ingredients:

- Soji-50 g
- Ghee - 40 g
- Sugar- 40 g
- Cardamom powder- a pinch.
- Kismis, cashew nuts – a few.

Method of preparation:

- Heat Ghee in a frying pan.
- Roast soji in to hot Ghee till little brown.
- Add warm water, and stir it continuously till all the water is absorbed.
- Add sugar, kismis, cardamom powder and small pieces of cashew nuts.
- Stir it continuously till all the sugar dissolves.
- Serve hot.

Cooking Time: 10 min
Total weight : 197 g



Fig. 1 : Rava Shira

Laddu:

Ingredients:

- Wheat flour course- 100 g
- Ghee- 60 g
- Oil -20 g
- Oil- for frying

- Powdered Sugar- 50 g
- Cardamom powder, Cashew nuts, Kismis, poppy seeds.

Method of preparation:

- Mix oil with wheat flour.
- Prepare hard dough by warm water.
- Prepare Muthiya (big balls) and deep fry till slightly brown and crispy.
- Allow it to cool down and than prepare course powder by grinding it in to mixer.
- Add powdered sugar, Cardamom powder, Cashew nuts and Kismis. Thoroughly mix it.
- Heat Ghee and add it to the mixed powder. Thoroughly mix it.
- Prepare medium sized Laddus (balls) approximately 100 g weight.
- Apply poppy seeds on Laddus.

Cooking Time: 25 min.
Total weight : 232 g



Fig. 2 : Laddu

Gol papdi (Sukhdi):

Ingredients :

- Wheat flour course- 100 g
- Jaggery- 50 g
- Ghee- 60 g

Method of preparation :

- Heat Ghee in a frying pan.
- Add wheat flour. Roast the wheat flour till it becomes little brown by stirring it continuously.
- Remove it from flame and add grated jiggery when hot. Till it continuously.

- Put this mixture in a broad vessel like thali (big dish). Apply pressure to spread it uniformly.
- Cut it in to diamond shape pieces.

Cooking Time: 05 min
Total weight : 201 g



Fig. 3 : Sukhdi

Bundi Laddu

Ingredients:

- Bengal gram flour 50g
- Sugar 30g
- Oil 20g
- Ghee 5g

Method of preparation:

- Make a medium batter with adding water in bengal gram flour.
- Heat oil in frying pan.
- Pass the batter in the big hole srainer. Fry it well.
- Make sugar syrup by adding sugar into heated



Fig. 4 : Bundi na Laddu

100 ml water.

- Put the bundis in the syrup for 30 minutes.
- Spread 1 tb ghee on it.
- Make balls of it.

Cooking Time: 15 min
Total weight : 106 gm

Magaj na laddoo:

Ingredients:

- Bengal gram flour 50g
- Sugar powder 25g
- Ghee 30g
- Milk 10ml

Method of preparation:

- 1t spoon milk, little Ghee add into black gram flour.
- Leave it aside for 30min.
- Sieve it thoroughly.
- Heat remaining Ghee in the pan and roast the above prepared mixture till it color changes in brown.
- Allow it cool and add sugar powder.
- Mix it properly and make small balls.
- Serve it.

Cooking Time: 15 min
Total weight : 273 g



Fig. 5 : Magaj na Laddu

It can be revealed from Shira contains good amount of moisture compare to other cereal products *Gol papdi* compare to *Laddu* because in *Gol papdi* Jaggery was used and in *Laddu* there was used a powder sugar. Fat

Table 1 : Nutritive value for 100 g

Sr. No.	Name of recipes	Portion	Fat	CHO	Total calery
1.	Semolina Shira	4.0	23.9	52	439
2.	Laddu	6.7	35	53	583
3.	Gol papdi (Sukhdi)	7.3	32	55	531
4.	Bundi Laddu	8.6	20	60	454
5.	Magaj	7.6	31.8	59	552.4

content of *Laddu* and *Gol papdi* is very much high fat Carbohydrates content comparatively high because there is low fat content. Because of the high fat content of *Laddu* and *Gol papdi* these products were found to be high in energy level compare to other products. Carotene level was also found high in *Laddu* and Lapsi comparative to *Gol papdi* and Shira because there was use of both (oil and *Ghee*) in *Laddu* and *Gol papdi* because there was use of Jaggery and was lowest in Semolina Shira because semolina contents low Iron compare to wheat. Ash was found to be highest in *Gol papdi* and lowest in Semolina Shira.

It can be *Bundi Laddu* contains good amount of moisture compare to other products was found to be high in energy level compare to other products. In *Bundi Laddu* magaj was found to be highest in magaj and lowest in *Bundi Laddu*.

Summary and Conclusion:

It can be revealed from Shira contains good amount of moisture compare to other cereal products of sweets. Jalebi also contains a good amount of moisture because they were deeper in sugar syrup. Protein was found to be considerably high in *Gol papdi* compare to *Laddu* because in *Gol papdi* Jaggery was used and in *Laddu* there was used a powder sugar. Fat content of *Laddu* and *Gol papdi* is very much high and contains low fat. Carbohydrates content of comparatively high because there is low fat content. Because of the high fat content of *Laddu* and *Gol papdi* these products were found to be high in energy level compare to other products. Carotene level was also found high in *Laddu* and comparative to *Gol papdi* and Shira because there was use of both (oil and *Ghee*) in *Laddu* and *Gol papdi* because there was use of Jaggery and was lowest in

Semolina Shira because semolina contents low Iron compare to wheat. Ash was found to be highest in *Gol papdi* and lowest in Semolina Shira.

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