

STUDY ON EXISTING BAKERY INDUSTRIES IN ALLAHABAD AND SENSORY EVALUATION OF BAKERY PRODUCTS

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ABSTRACT- Baked goods have been around from thousands of years and were developed during Roman Empire. Bakery industry is one of the major food industries in India. These industries have played an important role in the economic development of the country. The two most important bakery products viz., bread and biscuits account for about 81% of the whole bakery products. The Indian bakery sector consists of some of the large food categories like breads, biscuits, cakes etc. The branded packaged segment in this sector had a size of R 17,000 crore in 2015. There are many bakery items like pizza, sandwiches, buns, bread, chocolates etc. are manufactured in different bakeries of Allahabad, these comprise of 15 different types of breads, 12 different kinds of buns, cheese pasta and pizzas. Among all the bakery products the consumption of bread was recorded highest i.e. 35% followed by biscuits i.e. 25%. These products are having a good shelf life. Departmental stores in Allahabad are the main sources of purchase of the bakery products. Purchase made by the consumers from these stores responded satisfied (53%). Children (25%), students and their friends (35%) are the primary consumers of the bakery products followed by other members in a family. Among different bakeries in Allahabad visited and surveyed, on the basis of sensory data it can be concluded that Paradise bakery is having the highest products quality followed by the Calcutta bakery.

Key words: Bakery product, Consumption, Bakery Industries, Allahabad and Growth rate.

1. INTRODUCTION

Baked goods have been around for thousands of years. The art of baking was developed early during the Roman Empire. Due to the fame and desire that the art of baking received, around 300 BC, baking was introduced as an occupation and respectable profession for Romans. The oncoming demand vigorously continued for baked goods and the first bakers' association was established in 168 BC in Rome.

Bakery industry is one of the major food industries in India. It has played a significant role in the economic development of the country. The two most important bakery products viz., bread and biscuits accounts about 81% of the whole bakery products. The yearly manufacturing of bakery products which includes bread, biscuits, pastries, cakes, buns, etc. are from both the organized and unorganized sectors, which comprises 15 lakh tonnes most of which are in the organized sector is estimated to be around 31 Lakh tonnes. The production of bakery products in both is estimated to be around 15 lakh tones and 11 lakh tones respectively (4). The World War II directly affected the bakery industries in terms of quality of raw materials and due to closure of baking schools

during this time, resulted in less or an absence of skilled bakers. Thus, the old methods of baking were almost eradicated, and new methods were being developed to satisfy the world's desire for bread, which included methods like: adding chemicals to dough, premixes and specialized machinery.

The unorganized sector accounts for about half of the total biscuit production, 85% of the total bread production and around 90 % of the other bakery products estimated at 0.6 million tonnes (www.indiastat.com). The last includes pastries, cakes, buns, rusks and other products. The per capita consumption of bakery products in India is very low, which is about 1 to 2 kg per annum, which is comparatively much lower than the developed countries where consumption is between 10 and 50 kg per annum (12). In bakery industries different types of baked products are manufactured and each product has a specific palatable characteristic, which should qualify the quality standard laid by FDA and FSSAI.

1.1 Cookies in Allahabad city

Cookies are a bakery products, the best cookies of India made in Allahabad city. Many customers from different parts of the country purchase different flavors of cookies prepared in the city. They are made to cereal, ingredients and grains. Cookies are made of Indian butter, sugar and ghee. They are baked in the traditional oven but not in the microwave ovens. There are many different types of cookies:

(A) Assorted cookies (B) Straw cookies (C) Sugar free cookies

1.2 Pastries in Allahabad:

Bakery units in Allahabad are not only popular for cakes but they deliver some of the amazing pastries as well. The different types of pastry made in city like cartoon pastry, doughnut, cream roll pastry etc. The pastries are absolutely creamy and yummy. There are many different designs of pastries are available in the Allahabad market. The cartoon pastries are more popular among the kids of Allahabad.

1.3 Special snacks

The many number of food items likes pastas, pizzas, sandwiches, rolls, puffs, buns, bread and chocolates in Allahabad bakeries. It has prepared 15 different types of bread sticks, and breads, 12 different kinds of stuffed buns and buns, cheesy pastas and pizzas are available. The most popular one is the roasted chicken roll.

1.4 SCOPE IN INDDUSTRY

Bakery industry in India is the largest of the food industries with an annual turnover of about R 3000 crores in 2008. India is the second largest producer of biscuits after USA. Bread and Biscuits form the major baked foods accounting for over 80% of total bakery products produced in the country. India is among top producers of key raw materials of the bakery industry which puts sector in the sweet spot. Indian bakery segment is already in a favorable position with high rural penetration of its products which will help it tap the Indian rural consumption boom. The biscuit category is expected to continue its growth trajectory of 15 per cent going ahead.

2. Materials and Methods

2.1 Questionnaire for Bakery

1. What is your bakery name?
2. What are the major products manufacturing in Allahabad bakery?
3. What is the standard of raw material?
4. How much consumer is aware about bakery products?
5. What is the life of your bakery?
6. Which raw materials are used for products manufacturing in bakery units?
7. Which machinery is used in your bakery units?
8. What quality and sensory property of bakery products?
9. What packaging material are you used?
10. Which regulation are you following for food safety?

2.2 Survey of Matu bakery: Matu bakery produces cake and wedding cake only.

2.2.1 Ingredients for wedding cake:

According to owner, ingredients used in wedding cake manufacturing.

- (1) Maida 1 kg (2) Ghee 1 kg (3) Sugar 1 kg (4) Egg 24 (5) Dry fruits according to choice

Procedure:

Grinding sugar and mixed with ghee, Maida, dry fruits, and egg

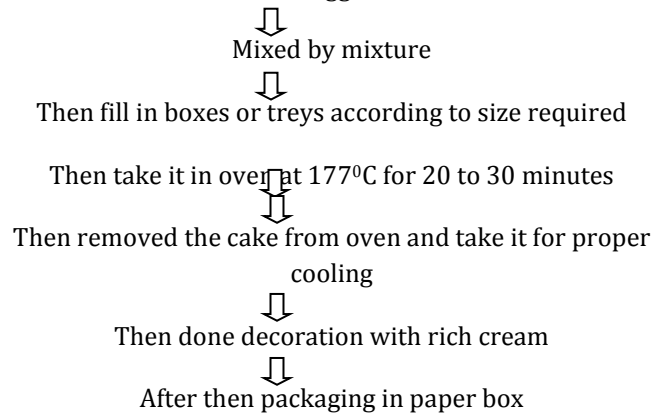


Fig. 2.1: Methods of Cake Making

3. RESULTS AND DISCUSSION

3.1 Bakery Industries and Their Products in Allahabad

The production capacity and the type of products manufactured in these bakeries in Allahabad region is represented in table 4.1, which shows the maximum production of bread and biscuits followed by other baked products by almost each bakery visited and surveyed.

Table 3.1 Bakery industries and their Products in Allahabad

S.N.	Bakery Name	Product Name
1.	Paradise confectioneries	Bread, biscuit, pastries, cake, wedding cake and pizza
2.	Calcutta Bakery confectioners shop	Bread, brown bread, biscuit, pastries, and cake
3.	Matu bakery	Cake & wedding cake
4.	New raja Bakery	Bread, cup cake, biscuit, pastries, cream roll and cake
5.	Statesman Bakery & Confectionery house	Bread, biscuit, pastries, cake, and wedding cake

Reviews of customer after using the bakery products were recorded and represented in tabulated form:

3.2 Sensory evaluations of bakery products

Sensory evaluation was done for many samples and compared with the locally manufactured available bakery items by the panel of 20 members using a nine-point hedonic scale and the results was analyzed statistically.

3.3 Sensory evaluation of Bread

In research survey mostly bakery brand was included which was located in Allahabad; on the bases of sensory evaluation of selected brand product (bread) paradise bakery have the higher points for product quality and overall acceptability.

Table 3.2 Sensory evaluation of Bread of different bakeries

Product (Bread)	Color	Texture	Flavour	Overall Acceptability	Level of Evaluation
Gupta bakery	8	8	7.5	7.8	Like moderately
New Raja bakery	7	8	7.5	7.5	Like slightly
Calcutta Bakery	8.5	8.5	8	8.3	Like very much
Paradise bakery	8.5	9	8.5	8.7	Like very much

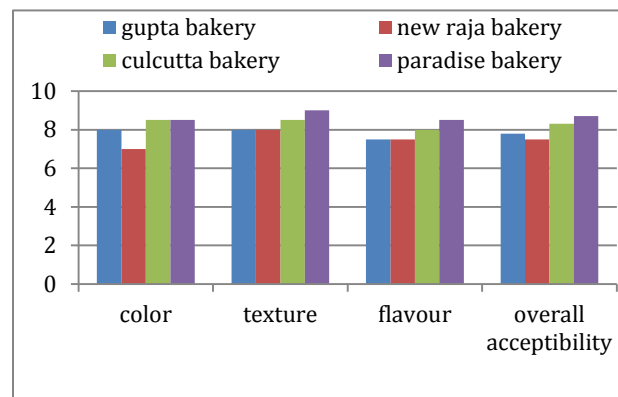


Fig. 3.1 Evaluation of different bakeries Bread

3.3 Sensory evaluation of Biscuit

In research survey mostly bakery brand was included which was located in Allahabad; on the bases of sensory evaluation of selected brand biscuits paradise bakery have the higher points for product quality and overall acceptability.

Table 3.3 Sensory evaluation of Biscuits of different bakeries

Product(Biscuits)	Color	Texture	Flavour	Overall Acceptability	Level of Evaluation
Gupta bakery	7	7.5	7.5	7.3	Like moderately
New raja bakery	6	7	7.5	6.8	Like slightly
Calcutta Bakery	8	8.5	8	8.1	Like very much
Paradise bakery	8.5	8.5	9	8.6	Like very much

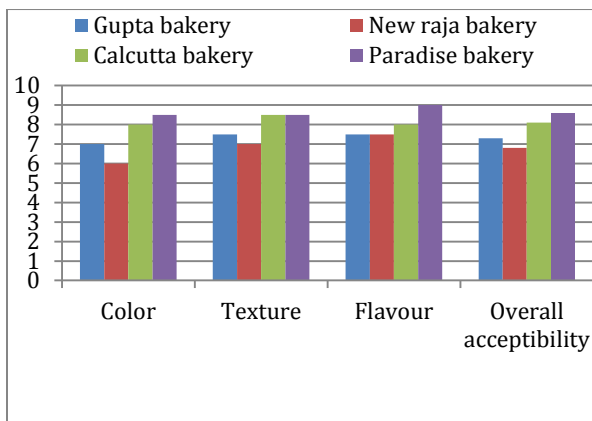


Fig: 3.2 Evaluation of different bakeries Biscuit

3.4 Sensory evaluation of Cake

In research survey mostly bakery brand was included which was located in Allahabad; on the bases of sensory evaluation of selected brand product (cake) Matu bakery and Paradise bakery have the equal and higher points then second position have the Calcutta bakery for product quality and overall acceptability.

Table 3.4 Sensory evaluation of Cake of Different bakeries

Product (Cake)	Color	Texture	Flavour	Overall Acceptability	Level of Evaluation
Statesmen bakery	7.5	8	7.5	7.6	Like moderately
Calcutta Bakery	8	8	8.5	8.1	Like very much
Paradise bakery	8.5	8	8.5	8.3	Like very much
Matu bakery	8.5	8	8.5	8.3	Like very much

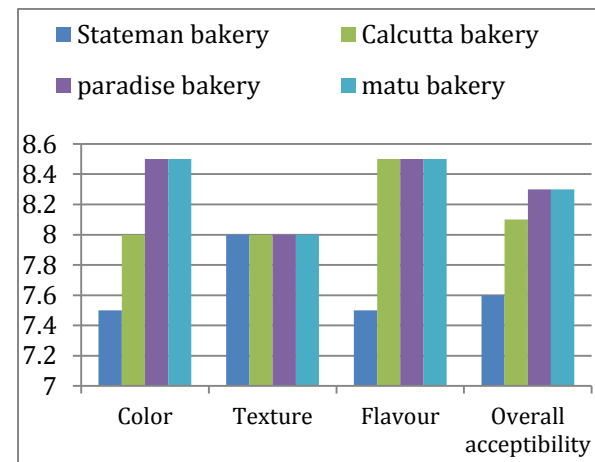


Fig: 3.3 Sensory Evaluation of different Bakeries Cake

4. CONCLUSIONS

The bakery industries at Allahabad are growing industry in the terms of quality and marketing of products. The bakery owner produces the different types of baked products such as bread, biscuit, pastries, cake etc. Overall the bakery units at Allahabad are the developing industry in the field of bakery and in future it may become larger scale. The physical characteristics showed considerable effect on increase in wheat flour by increase in hardness of bakery products. In the study, results indicated that at present time paradise bakery have the superior ranked in bakery industries because it have the highest quality and baked product in Allahabad, after paradise, Calcutta bakery have become ranked second.

REFERENCES

1. Aleksandar Maric, Slavko Arsovski, Jasna Mastilovic (2009) contribution to the Improvement of Products Quality in Bakery Industry, *International Journal for Quality research* UDK- 378.014.3(497.11)
2. Baisya, R.K. (2007) Bakery Industry in India, *Processed Food Industry*, 10:13.
3. Bhagvat, N. B. (2001), 'Study of Bakery Industry in Kolhapur district with special reference to production, financial and marketing problems', *Unpublished phd Thesis submitted to Shivaji University, Kolhapur*.
4. Mohammed asmatoddin, g.t. Pawar and khan darakshan irfana (2008) Performance of bakery and confectionary food processing units in Maharashtra, India, *Internat. J. Agric. Sci. Vol.4 No.1 January, : 132-137*
5. Dubey, S.C (2002) Basic Baking Published by Society of Indian Bakery, F-1 Jyoty Building, 16A/19, Ajmer Khan road, Karol Bagh, New Delhi.
6. Dr.Lakshmi J, Associate Professor, Dept of Food Chemistry Bakery and Confectionary Products: Acharya N. G. Ranga Agricultural University, *College of Food Science and Technology, Bapatla*.
7. FICCI Study on Implementation of Food Safety and Standard Act.(2007). An Industry Perspective report PP.3
8. Manley, D. (1991) Technology of biscuits, Crackers and Cookies. Woodhead Publishing Ltd, Cambridge, UK.
9. Nare, P. D. (2002), 'A study of bakery industry in Belgaum district (with special reference to financial and marketing problems).' Unpublished Ph.D Thesis submitted to Shivaji University Kolhapur.
10. Selvaraj A., Balasubramanyam N., and Rao H.(2002) Packing and Storage studies on biscuit containing finger millet(ragi) flour. *J Food Sci Technol*. 39(1):66-68.
11. Serivastava A. India per capita biscuit consumption. (2009) July 04, Indiaretailing Bureau.
12. Suresh Bhise¹, Kaur A (2013) Department of Food Science & Technology, Punjab Agricultural University, Ludhiana-141004, *International Journal of Advanced Scientific and Technical Research Issue 3 volume 1, ISSN 2249-9954*
13. T.Pradeep Raj, R.Ramkumar and A.K.Subramani (2015) Customer Satisfaction towards Good Day Biscuits, Avadi, Chennai, *International Journal of Multidisciplinary Management Studies, ISSN 2249-8834*
14. Townsend, G.M. (2001) Cookies, cakes and other flour confectionery. In Dendy, D.A.V. and Dobraszczyk, B.J., *Cereals and Cereal Products: Chemistry and Technology. ASPEN Publishers, Inc. Gaithersburg Maryland*. Pp 233-252.
15. U.S. Department of Agriculture, Food and Nutrition Service, & National Food Service Management Institute. (1996). Choice plus: A food and ingredient reference guide. Washington, DC:Autho