



White Breads: Which One Should You Choose?

There are different types of breads available in the market. Some breads are soft or crumbly or crispy and come in different shapes and sizes. Bread is the cheapest and basic instant food available for consumption. The consumption of bread has increased over the years. In India, it is still a secondary staple food when compared to chapatti, poori or rice. Bread is generally a highly perishable item, which has a shelf life of maximum of 72 hrs in a tropical country like India. The government has made it mandatory to mark use by date / date of expiry on the package of the bread. Therefore, once the bread is baked and packed, any baker will make it a point that it reaches the market at the earliest.

A Consumer Voice Report

The test report that follows will tell you how 6 premium brands of white bread compare against each other. The test programme of comparative testing of white bread was mainly based on Food Safety & Standards Regulations (FSSR) and relevant BIS standard IS: 1483. Testing of white bread was conducted in a NABL accredited laboratory. The tests for total solid,

dietary fibre and protein, quality and safety tests including test for potassium bromate were conducted. Sensory and microbiological was also conducted as bread is a highly perishable product with a shelf life of barely five days. Bread should meet FSSR standards within the consumption period or before use by date.

Brands Tested

Consumer VOICE tested 6 popular brands of white bread whose details are given below:

Rank	Overall Score out of 100	Brand	Quantity, gm	MRP, Rs	Best Before/ use by date	Marketer/manufacturer
1	93	Britannia	450	40	Provided	Britannia Industries Ltd
2	90	Bonn	350	25	Provided	Bonn Nutrient Pvt Ltd
2	90	English Oven	350	25	Provided	Mrs Bector Food Specialties Ltd
3	89	Mother Dairy	350	25	Provided	Mother Dairy Fruits & Vegetable Pvt Ltd
3	89	Perfect	700	50	Provided	L. R. Foods Pvt Ltd
3	89	Harvest Gold	350	25	Provided	Ready Roti India Pvt Ltd

Rating: >90 – Very Good *****, 71-90- Good ****, 51-70- Average ***, 31-50- Poor **, upto 30 – Very Poor *

CV Recommendations

Top Performer
Britannia
Value for Money
Bonn, English Oven

Key Findings

- Britannia scored the highest among all the brands, and was thus ranked No.1 followed by Bonn and English Oven.
- Dietary fibre was found higher in brand Britannia and Harvest Gold, followed by Bonn.
- Britannia had the highest total solids, followed by English Oven and Mother Dairy.
- Protein was found the highest in Mother Dairy, followed by Bonn and Britannia.
- All the brands were found acceptable in sensory tests.
- All of the brands were determined to meet the microbiological requirements for food safety, making them all suitable for eating.





Comparative Performance Score

Test Parameters	% weight age	Britannia	Bonn	English Oven	Mother Dairy	Harvest Gold	Perfect
Total solid content	10	9.26	6.98	7.67	7.43	6.70	7.27
Dietary fibre	10	10.0	9.86	8.53	6.75	10.0	9.34
Protein	10	8.86	9.16	8.74	9.76	7.54	6.67
Acid insoluble ash	7	6.72	5.74	5.60	5.88	5.94	6.58
pH of bread	6	5.42	4.61	5.28	5.47	5.09	4.99
Alcoholic acidity	6	4.20	5.40	5.40	6.00	5.40	6.00
Potassium bromate	5	5.00	5.00	5.00	5.00	5.00	5.00
Packing & Marking	5	4.50	4.50	4.50	4.50	4.50	4.50
Net Weight	3	3.00	3.00	3.00	3.00	3.00	2.70
Microbiological Tests							
Salmonella	5	5.00	5.00	5.00	5.00	5.00	5.00
Listeria Monocytogenes	5	5.00	5.00	5.00	5.00	5.00	5.00
Yeast & Mould count	3	3.00	3.00	3.00	3.00	3.00	3.00
Total Plate Count	3	3.00	3.00	3.00	2.70	3.00	3.00
Sensory Tests	22	20.0	20.0	20.0	20.0	20.0	20.0
Overall score(Rounded off)	100	93	90	90	89	89	89

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Sensory tests includes taste/flavour, appearance & texture, physical defects and packaging



Test Parameters and Results

Total Solids

The dry matter that remains after moisture removal is referred to as total solids. Total solids are measured by weighing the amount of solids present in a known volume of sample. This value is of great economic importance to a food manufacturer, and there are legal limits as to how much water can be present in a food item. It should be not less than 60 % by mass as per BIS standard.

All the brands meet this requirement of Indian standard. Britannia had the highest total solids followed by English Oven and Mother Dairy.

Dietary Fibre

There are two types of fibre: soluble and insoluble fibre. Dietary fibre is an essential component of a healthful diet, with research linking a high fibre diet with reduced risks of many health conditions. Fibre is also important for keeping the gut healthy. White bread may

contain dietary fibres up to 15% maximum subject to label declaration under labelling regulation.

Dietary fibre is found mainly in fruits, vegetables, whole grains and legumes. It is probably best known for its ability to prevent or relieve constipation.

All the brands of white bread were found above the claimed dietary fibre. Dietary fibre was found the highest in brand Britannia and Harvest Gold followed by Bonn.

Protein

Protein is an essential nutrient that is found in every cell in our bodies and in our blood stream. Protein play an important role in the cellular maintenance, growth, and functioning of the human body. There is no specified requirement of standard for protein content in breads. Protein content was found ranging from 7.29 % to 8.32%. Protein was found the highest in Mother Dairy followed by Bonn and Britannia.



Acid Insoluble Ash

Acid insoluble ash indicates the presence of sand, dirt and dust. Acid insoluble ash content in bread should not be more than 0.2 % as per FSSR.

Acid insoluble ash in all the brands was found within the specified standard limit. It was the lowest in Britannia and highest in English Oven.

pH of Bread

AS per BIS standard, white bread pH should be 5.0 to 6.0. All the brands were found within the specified limit of standard. Mother Dairy scored highest in this parameter followed by Britannia.

Alcoholic Acidity (with 90 percent alcohol)

Alcoholic acidity should not be more than equivalent of 7.5 ml N NaOH per 100 gram of dried substances. Alcoholic acidity determines

the shelf life of bread. It is expected to be lower the better in bread.

All the brands were found within the specified limit of national standard. Mother Dairy and Perfect brand had the lowest alcoholic acidity among the brands tested.

Potassium Bromate

Potassium Bromate is a dough improver which is banned in India due to its carcinogenic effects on human. We have tested to confirm that it is absent in all the brands. Potassium bromate was found absent in all the brands.

Microbiological Tests

Microbiological contamination is a very serious issue for food products. Microorganisms are responsible for many food borne diseases. The FSSAI has specified microbiological

requirements for process hygiene criteria and food safety criteria. Microbiological parameters under process hygiene criteria are not applicable at retailer/consumer level.

We conducted this test for Salmonella and Listeria Monocytogenes under food safety criteria of FSSAI and total plate count and yeast & mould count for the consumer point of view.

Salmonella

Salmonella is a genus of gram-negative bacteria of the family Enterobacteriaceae and may cause gastroenteritis and focal infection. Salmonella should be absent/ 25 g.

Listeria Monocytogenes

Listeria monocytogenes is a pathogenic bacteria that causes the infection listeriosis. It shall be absent/ 25g. All the brands met the food safety criteria requirements. Salmonella and Listeria monocytogenes were found absent in all the brands tested.

Yeast & Mould Count / Total Plate Count

All the brands had zero yeast and mould count. In Total Plate count test, Mother dairy was found with 3000 cfu/g.

This indicates better hygienic condition during manufacturing and processing. All the brands of white bread complied in yeast & mould count as it was found less than 10cfu/g.

Sensory Tests

This is a very important parameter where subjective panel tests were conducted based on their critical examination and opinion since the consumer is very critical on selection of product from retail stores that makes that brand most acceptable/least acceptable in respect of price. During this test, we determined the overall organoleptic (sensory) quality of the product in terms of consumption. We conducted the sensory tests against physical defects (Free from dirt, insect and insect fragments, larvae, rodent

hairs), appearance & texture and taste/flavour. These tests were conducted in the laboratory.

All the brands were free from dirt, insect and insect fragments, larvae, rodent hairs, etc. The taste/flavour was acceptable and light sweet. The appearance and texture was white and soft. The packaging was in good condition.

Packing

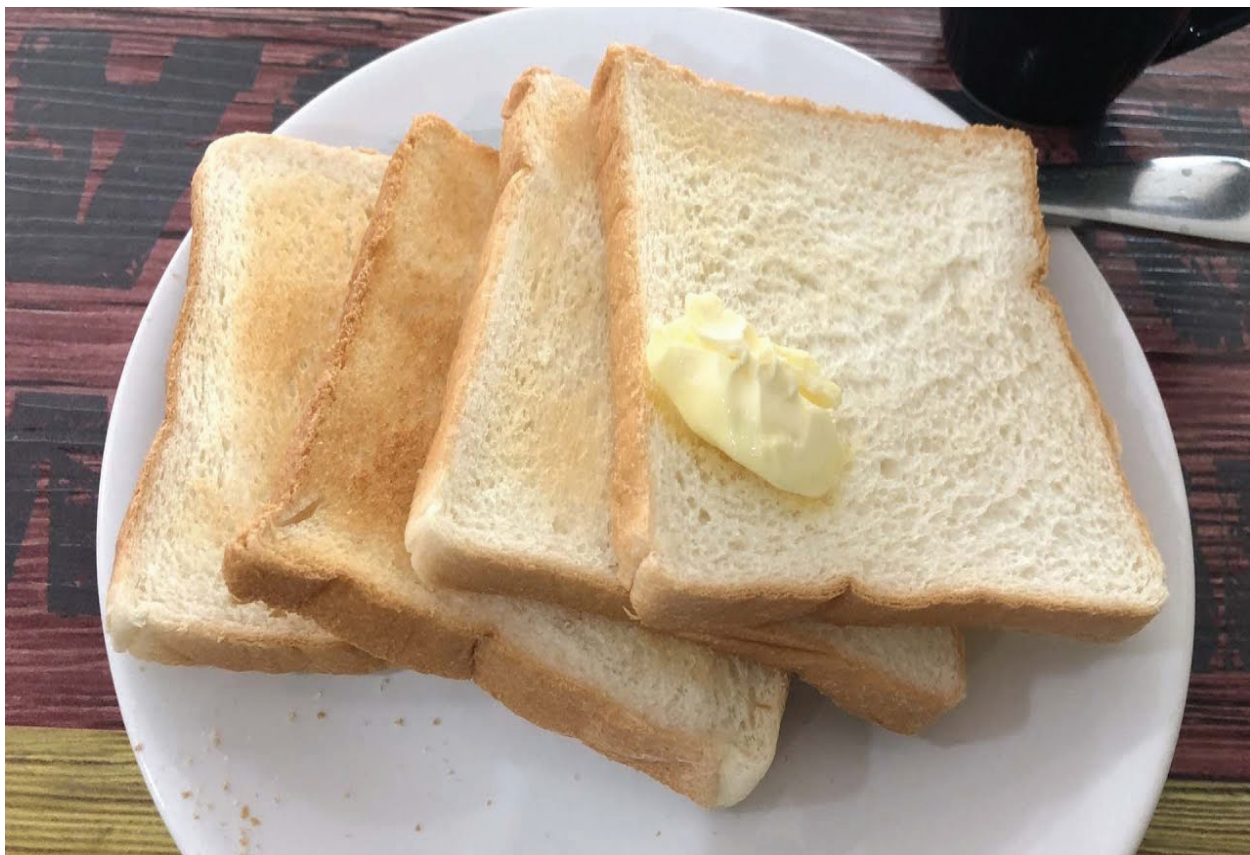
The bread should be wrapped or packaged in sliced form in clean waxed paper or any other suitable food grade wrapper to preserve freshness. All the samples of white bread were packed in poly pack. All white breads were sealed through tape or plastic strip. It is not a fair practice from the consumer point of view.

Marking

The following particulars has to be clearly and indelibly marked on each pack of bread on the outer side of the wrapper; printing if any shall be done by non-toxic and non-transferable ink.

- a. Name of material
- b. Name and address of the manufacture
- c. Batch no/lot no
- d. Mass of the loaf when packed
- e. Any additional ingredients, for example nutrients like vitamins and minerals, preservatives, dough conditioners or emulsifying agents
- f. Green dot mark for vegetarian
- g. MRP in Rs.
- h. Best before/Use by date
- i. Customer care details

Food with shelf life of not more than 7 days, the date of manufacture may not be required to be mentioned on the label of packaged food articles, but the 'Use by date' has to be mentioned on the label by the manufacture or packer. So, most of the breads declare 'use by date' on the label/



wrapper. None of the brand marked date of packing.

Net Weight

As per the Legal Metrology (Packaged Commodities) Rules, 2011, maximum permissible errors on net quantity declared is 3% for 300 to 500 pack and 15gm for 500 to 1000 g.

All the brands of bread met the requirement of Legal Metrology (Packaged Commodities) Rules, 2011 and passing test.

Conclusion

We have good news for consumers as all the brands cleared all the tests. Organoleptic properties of bread also play a very important role in the acceptance of it by the consumer. We had observed the samples for appearance & texture, flavour / taste and physical defects too. All the brands were found acceptable. Based on the analysis and evaluation of all test

parameters and observations, brand Britannia scored the highest among all the brands and was thus ranked No 1 followed by Bonn and English Oven.

White bread is made up of only the endosperm part portion of the kernel. The fiber rich, nutritious part of the wheat grain like bran and germ are removed from it. On the other hand, brown bread or whole wheat bread includes all parts of the grain - the bran, endosperm and the germ, thus making it more nutritious and healthy than the white bread. White bread does not become rancid as quickly and easily and therefore has a longer shelf life. It is less vulnerable to rancidity because it does not contain the germ. White wheat flour leavens better because it contains more gluten per weight.