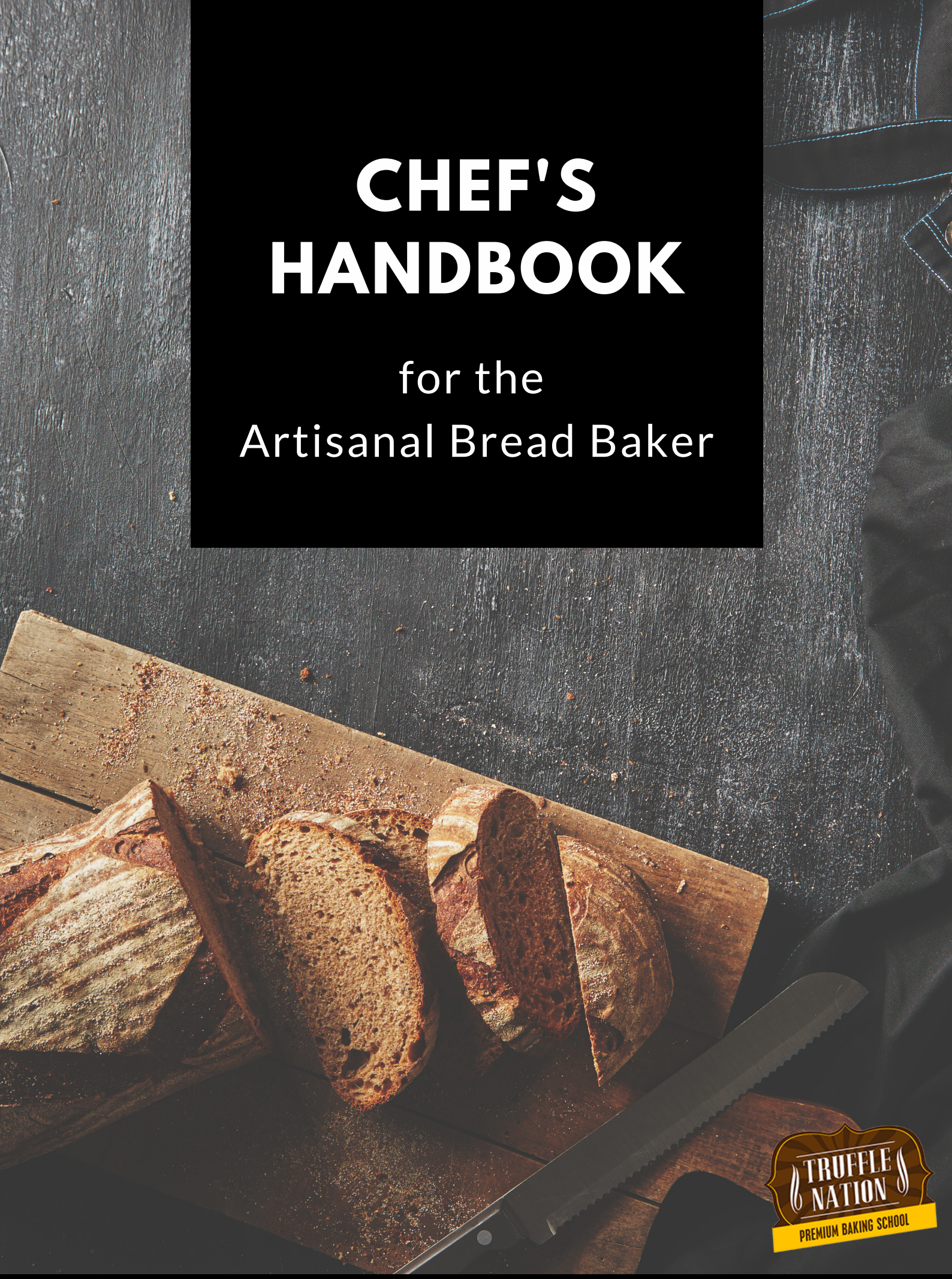
CHEF'S HANDBOOK

for the Artisanal Bread Baker



EDITED BY CHEFS AT TRUFFLE NATION

INDEX

BASIC UNDERSTANDING OF BREADS

The baking process can be defined as a natural and logical succession of steps that will ensure the proper transformation of basic ingredients into a loaf of bread.

Bread making is a combination of art and science, apart from the good quality of ingredients, the temperature and the environment has a large role to play in the making of the final product.

Baking bread begins with combining the appropriate ingredients as outlined in a formula. Bakers combine various ingredients to make a wide variety of breads. Selecting the right ingredients makes the difference between producing excellent breads and poor quality breads. Any significant change in ingredients will affect the final product quality and customer satisfaction.

A strong understanding of how individual ingredients function and how they interact in a dough system is critical.

The most basic and ancient bread formulas consist of flour, water, salt, and yeast. From that basic formula, thousands of varieties have been created. Breads may include ingredients such as milk, eggs, various fats, fruits, nuts, sweeteners, etc.

TOOLS AND EQUIPMENTS USED

1. **SIEVE**
   A sieve is used to sift all the dry ingredients so as to get rid of any unwanted particles or impurities that may be present. It also breaks any lumps and provides aeration to the flour. A drum sieve with a fine mesh is most widely used.

2. **WEIGHING SCALE**
   A digital scale is recommended as it can provides exact measurements as accuracy is most important.

3. **MIXING BOWLS**
   Though any bowl can be used but a big glass bowl is a preferred choice as it provides room for proofing of dough and also provides a clear view.

4. **DOUGH SCRAPER**
   It is used for shaping and cutting the dough. It is very useful if one is working directly on the counter as it can be used to combine back all the scattered ingredients. A strong steel dough scraper should be chosen over a loose plastic one if one is working with a more hydrated dough.

5. **OVEN THERMOMETER**
   Although every oven has its own way of showing the inside temperature, but it is a good idea to invest in an oven thermometer as it gives more accurate readings of the inside temperature of an oven.

6. **KITCHEN THERMOMETER**
   When it comes to checking the doneness of breads, it is the best tool one can have as it can easily give the inside temperature of a baked bread

7. **COOLING RACK**
   It is as important as any other tool, as after baking the bread, it is very important to cool down the bread on a cooling rack so that the bread gets air circulation from all sides.

8. **LOAF PAN**
   Also known as Bread tins, these are required to bake the bread in a particular shape. One can have a loaf pan of any shape, be it rectangular or round. But make sure it is sturdy one which can handle the pressure of dough while proofing without changing its shape.

9. **BREAD KNIFE**
   To cut the bread loaves, only a bread knife should be used as it has serrations which can easily slice a loaf without crumbling or breaking it.

10. OVEN MITS

A good quality oven gloves should be used which has extra padding or even silicon oven gloves can be used to prevent burns on hand.

11. OVEN TRAY

An oven tray is used for making loaf of breads without any tin or mould. A sturdy good quality tray should be preferred.

12. PROOFER

Mostly used where large quantities of bread is being made, it helps the bread to proof at a faster rate without making the dough dry as these comes with an option to control humidity.

13. OVEN

An oven can be of any kind, Deck, OTG or convection, but one has to ensure that it has both upper and lower rods to facilitate even baking.

ROLE OF INGREDIENTS IN BREAD MAKING

Every ingredient used in the making of bread has a particular role to play in achieving the final, desired product. These ingredients however perform only when certain conditions are met and are highly dependent on each other to perform that particular function to the desired level.

1. **FLOUR**
   Wheat flour dough has the unique ability to retain the gas produced during yeast fermentation or by chemical leavening. The flour is responsible for the characteristic structure of bakery foods. Wheat flour is the key ingredient in most breads. Flour quality is particularly important in bread making as the quality of the flour will have a significant impact on the finished product. When flour is moistened and stirred, beaten or kneaded, gluten develops to give dough 'stretch'. The elastic framework of gluten holds the gas produced by the fermentation action of yeast.

2. **WATER**
   The main function of water is hydration. Ingredients must have water in order to function as expected. For example, flour must be hydrated in order to form gluten and for the starch to gelatinize. Water also serves as a dispersing agent and a medium for fermentation. There is a direct relationship between the amount of water present in a dough system and the rate of fermentation. The amount of water in flour is called hydration and is measured in percentage with regards to flour.

3. **YEAST**
   Yeast is a living organism which can be affected by storage practices, dough temperatures, pH, availability of water, and food supply. Of these control points, the most important is temperature. Yeasts are microorganisms that convert sugar into alcohol and carbon dioxide.

   Yeast's primary function in a bread dough is to provide leavening. It contributes to flavor and aroma through fermentation. Several forms of yeast are used: **Active dry yeast, Instant yeast, Compressed yeast, or Natural yeast**. The type of yeast used depends on the volume of product.

   Home bakers or small retail bakers may use a form of dry yeast since refrigeration is not necessary, and the shelf-life is fairly long. **Active dry yeast** needs no refrigeration and has 2-12 months storage life, depending on packaging. Active dry yeast must be rehydrated with water at 105-110°F (40-43°C) for about 10-15 minutes before use.

   For **instant yeast**, no refrigeration is required and storage life is one year or more due to packaging in inert gases or under vacuum. Once the package is opened, it is recommended that it be used within three days. Instant yeast is extremely convenient since it does not have to be hydrated prior to use unlike active dry yeast does. It may be added directly with the other dry ingredients and blended, or delayed until no loose water is visible in the dough.

There are 25 Percent more living yeast cells per teaspoon in Instant yeast than in an equal amount of active dry yeast and there are three times more living cells than in an equal amount of fresh compressed yeast,

Compressed yeast is commonly used in retail bake shops as well as in large wholesale bakery production. It can be purchased in many sizes, from 1-pound cakes to 50-pound bags. The general water content of compressed yeast is 70% and is highly perishable outside of refrigerated storage conditions of 36-45°F (2-7°C).

Yeast performs other functions in addition to leavening. During fermentation, yeast converts fermentable sugars such as maltose, glucose, fructose, and sucrose into carbon dioxide and alcohol, which generates heat. A baker can judge fermentation by monitoring the increase in temperature. Flavors are generated by the acids that are created during fermentation. Acids also mellow the gluten which can reduce the energy requirements to fully develop a dough.

4. **SALT**

Salt brings out the flavor in baked goods. Salt is typically used at levels of 1.50-2.25%. Bread made with less salt will taste blander, and bread made with more than 2.25% salt will taste salty.

In addition to adding flavor, salt also inhibits fermentation due to the osmotic pressure effect, which is the partial dehydration of the yeast cell. Salt also toughens the gluten. Weak flours can be strengthened by adding salt. Salt lengthens mixing time, so it is common to delay the addition of the salt until the end of the mixing process. When the addition of salt is delayed, the toughening effect is also delayed, and mixing time can be reduced by 10-20%.

5. **SUGAR**

The main functions of sugar is to provide food for the yeast and give a sweet flavor to the finished product. In normal bread production, 3-3.5% fermentable solids are required for

yeast activity. This food supply can come from added sugar, conversion of starches to sugars, or a combination of both.

Sugar is not an essential ingredient. Secondary functions of sugar are all related to non-fermented (residual) sugar. When residual sugar levels are higher, crust color is darker, taste is sweeter, and moisture retention is improved due to the hygroscopic properties of sugar.

Flour naturally contains about 2.5-3% of sugar in the form of sucrose and maltose. This is enough for the yeast in the initial stage of fermentation. However, in the final proof when maximum of the sugar is required to be broken down for an optimum rise, the natural sugars are exhausted and the addition of sucrose or maltose is required.

6. **BREAD IMPROVER**

It is blend of ingredients that activate the gluten and assists in improving the processes of dough kneading and fermentation. This results in a lighter loaf with better texture and keeping qualities. It also improves the crumb structure making the bread lighter and soft.

7. **GLUTEN POWDER**

It is almost pure gluten, blended in a powdered form. When added to the dough it improves its elasticity and also improves the crumb and chewiness of the final bread. It can be added to any recipe but is mostly preferred when baking with low protein flour or when its difficult to form the gluten, like in whole wheat flour.

8. **OIL/FATS**

Fats and oils are used in bread production to provide overall lubrication and to aid with slicing. A minimum of 0.7-1% is recommended for good slicing, although some bakers use less than this in low-calorie breads, and higher levels of 2-5% in richer bread products.

Besides lubricating the baked crumb, fats and oils also lubricate the dough, easing dough expansion and helping with the handling of the dough throughout the makeup processes. They also tenderize the crumb and improve shelf life by delaying staling.

7. **MILK**

Milk solids are used in bread formulas for many reasons, and they offer a wide range of functionality. Milk is high in lysine and calcium, and the overall nutritional quality of the milk protein is excellent.

Milk solids also impart a rich flavor to a finished product. They also create a deeper crust color which can contribute to an improved flavor profile. In addition to finished product benefits, milk solids provide function and benefit to dough processing. Milk is an excellent buffer, so milk solids can slow or regulate fermentation. They also strengthen the gluten matrix, which improves overall process tolerance.

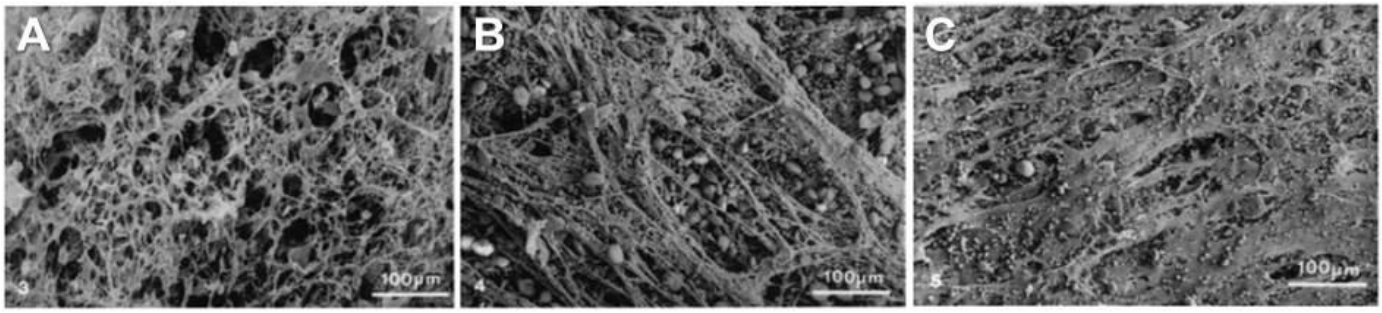
UNDERSTANDING GLUTEN

The two primary proteins in wheat—**glutenin** (protein that will have some effect on the elasticity of the dough) and **gliadin** (protein that will affect the extensibility of the dough)—are responsible for the formation of the dough.

Depending on their quality, these proteins can absorb 200 to 250 percent of their weight in water. As they inflate, they become attracted to each other and form chains of proteins called **gluten**.

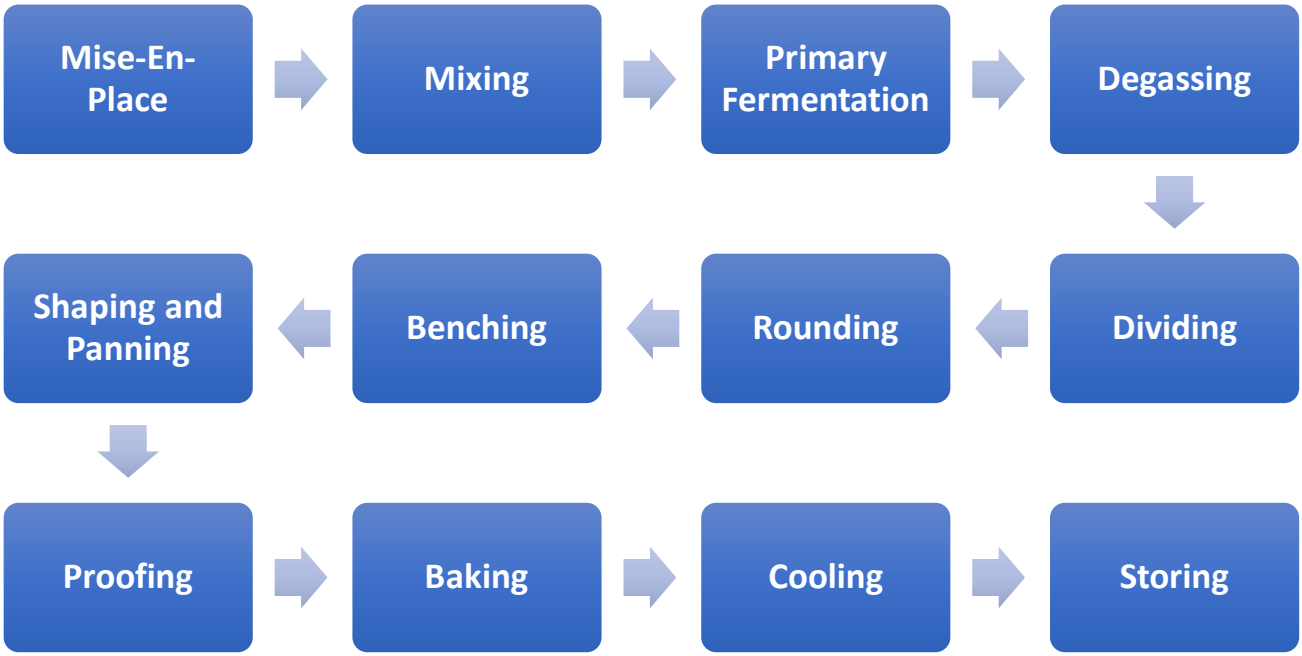
Gluten does not dissolve in water. When it comes in contact with moisture, however it aligns itself with it to form long chains which, when kneaded gives the dough enough elasticity for it to be stretched to over a foot and lend the baked product a chewy texture.

A longer mix will generate a well-developed gluten structure, while a shorter mix will generate an underdeveloped one. Care must be taken to prevent mixing for too long, as it will stretch the gluten chains to the point where they will break, which is called overmixing the dough.



(From Left to Right): **STAGES OF GLUTEN DEVELOPMENT**

STAGES OF BREAD MAKING



1. **MISE-EN-PLACE**
   The most important thing required in a bakery operation is to collect all the ingredients first. This allows us to do things in a planned manner and the product will also come out to be of the desired quality. The mise en place for bread making would include:

   - Weighing all the ingredients as per the recipe and making sure the ingredients are at the required temperature.
   - Selecting and preparing the bread tins, Grease the mould with oil properly to avoid the baked bread from sticking to it.
   - Making sure that the temperature of the oven is at the required degree as the temperature of baking is very crucial and would change with different types of breads.

2. **MIXING**
   Mixing is an important step of the baking process. During this step, the baker combines all of the ingredients together to make the dough. Several important principles must be respected to achieve optimum quality for the dough and bread.

3. **PRIMARY FERMENTATION**
   Also called **bulk fermentation** or **floor time**, **primary fermentation** takes place when the dough is allowed to ferment as a large mass. This mass effect creates conditions that are optimum for the development of all of the benefits fermentation brings to the dough, including increased dough strength and development of flavor.

Many factors such as the recipe, room temperature and humidity, will determine how long it takes the dough to rise. Yeast dough is considered “ripe” when it has risen enough, usually doubling in size.

The **ripe test** determines if the dough is ready to be punched down and shaped. Gently stick two fingers in the risen dough up to the second knuckle and then take them out. If the indentations remain, the dough is “ripe” and ready for punch down. If not, cover it and let the dough rise longer.

4. **DEGASSING**

The simple process of punching the dough after primary fermentation is called degassing. Degassing expels some of the carbon trapped in the gluten network as too much carbon dioxide will choke the yeast. Another benefit of degassing is that it equalizes the dough temperature, the temperature on the outside of the dough is usually cooler than the interior, so the punch down helps in bringing it back to the equilibrium. Lastly, when the dough is degassed, it allows for redistribution of the nutrients and triggers a new feeding cycle.

5. **DIVIDING**

During the **dividing** step, the bulk of the dough is divided into small pieces according to the final weight of the bread and the weight loss that will occur during baking. For manual dividing, the baker must handle the dough very carefully to avoid damaging or disorganizing the gluten structure. Also, when cutting portions of the dough, an effort should be made to have one piece of dough, as opposed to many little pieces that have been put together to obtain the desired weight.

6. **ROUNDING**

After dividing, the pieces of dough are shaped into smooth round balls. This procedure forms a kind of skin by stretching the gluten on the outside of the dough into a smooth layer. Rounding simplifies the later shaping of the dough and also helps retain gases produced by the yeast.

7. **BENCHING**

Rounded portions of dough are allowed to rest for 10 to 20 minutes. This relaxes the gluten to make shaping the dough easier.

8. **SHAPING AND PANNING**

After a period of rest, the dough is formed to its final shape. This operation can be achieved by hand or by machine. At this stage, you should carefully judge the characteristics of the dough and adapt the hand shaping or adjust the machine settings accordingly.

Weak dough should be shaped tighter, while strong dough will benefit from a gentler shaping. In fact, this is the last chance to modify the dough, if necessary, in order to get optimum product quality.

9. PROOFING

This fermentation period takes place between shaping and the beginning of the bake. During **final proof**, the gas produced by the yeast will accumulate and create internal pressure on the gluten structure. Because of its physical properties, the gluten can stretch while maintaining its shape to create a loaf with great volume and a nice texture.

The dough should also be protected during this stage to avoid surface dryness that can cause a thick, hard crust with poor, dull color. Enclosed cabinets or rack covers can be used to prevent dryness when bread is proofed at room temperature (or at a proper setting of the humidity level in a proof box). Linen is also used to maintain the right level of moisture on the loaves while proofing, or a proofer-retarder with humidity control may be used.

10. BAKING

The bread is ready to be baked once it has proofed to optimum. Under proofing of the dough will yield in craked loaf and over proofing will make the bread collapse in the final baking process. During baking, the dough goes through the following three stages:

- **FIRST STAGE**
  The oven spring occurs and the gas bubbles in the dough expand and it rises rapidly. The yeast activity increases rapidly in the oven and the activity of the yeast stops as it kills the yeasts at 60 degrees. This causes a sudden burst in the volume of the bread and is called Oven Spring. Some of the starch is gelatinized to make it more susceptible to the enzyme activity.

- **SECOND STAGE**
  The dough solidifies because of the coagulation of proteins and transforms into bread. Here the gases escape out of the dough leaving a dispertion of holes, which are responsible for the sponginess of the bread.

- **THIRD STAGE**
  The dough gets its color and crust. Enzymes are active till about 80-90 degrees producing sugars even beyond the yeast activity. This helps in the coloring of the crust. The enzyme activity helps in the crumbs, crust color and bloom of the bread. As the baking proceeds, weight is lost by the evaporation of the moisture from the crust.

To check whether the bread has been baked perfectly or not, we take the internal temperature by using a probe thermometer. For hard crusted breads the temperature of the centre should be 96C and for soft crusted breads it should be 86C

11. COOLING

Most people think that the job is done when the loaves are baked. However, in reality the cooling stage is important to understand because it is a continuation of the baking process. The dough comes out of the oven at a minimum of 82 degrees, during this time, it continues to evaporate moisture, drying out and thus intensifying the flavour. During this process if you cut into a loaf it will seem doughy or under baked. The ideal temperature of a cooled dough is 80F (27C).

The bread must be cooled on a wire rack because if the bread is placed on a flat surface, the heat from the base will condense and the humidity will let the moulds grow into the bread.

12. STORING

Lean crust breads are stored differently than soft enriched breads, to preserve the crustiness of lean breads, store them in paper, though they will become stale within a day and are eaten best on the day they are baked. If you want to preserve them for more than a day, clean wrap the cooled loaves in plastic wrap. Then either freeze them or place them in a cool dark place.

Soft, enriched bread such as sandwich bread is always best stored in plastic wrap and either frozen or kept in a cool, dark place (exposure to sunlight causes the loaf to sweat, creating condensation in the wrapper and eventually mold the loaf).

PRE-FERMENTS

A pre-ferment is a preparation of a portion of a bread dough that is made several hours or more in advance of mixing the final dough. The preferment can be of a stiff texture, it can be quite loose in texture, or it can simply be a piece of mixed bread dough. Some preferments contain salt, others do not. Some are generated with commercial yeast, some with naturally occurring wild yeasts.

To add more flavor to breads, many bakers use pre-ferments, in which a portion of the bread flour is mixed with water, occasionally salt, and a tiny bit of yeast, and is then allowed to ferment for a long time – 12-18 hours, usually.

There are four basic types of pre-ferments, and they usually account for anywhere from 15% to 40% of the dough:

Pre-Ferments are basically divided into 2 categories:

- WET Pre-ferments
- STIFF Pre-ferments

WET PRE-FERMENTS

Wet pre-ferments generally have high water to flour ratio and are bit difficult to handle. These are mostly divided into two types.

POOLISH

Most famously used to make tasty baguettes, a poolish consists of equal weights of flour and water along with 0.25% or less yeast. Less yeast makes the fermentation process very slow which in return makes a very flavorful dough.

A poolish is ready when it is very bubbly, smells sweet and has just begun to recede from its high point. From 3 hours to 2 days, a poolish works just fine.

SPONGE

It is another category under wet pre-ferment. It is faster in process than poolish. Most of the yeast in entire bread is present in sponge. Minimum time required is 1 hour to start fermentation.

STIFF PRE-FERMENTS

These kind of pre-ferments are generally like a dough and has less hydration in comparison to wet pre-ferments.

BIGA

“Biga” is just an Italian word for pre-ferment, but in the English speaking world, it has come to mean a stiff pre-ferment, usually a dough at about 60% hydration with just a pinch of yeast. It should be kneaded for a few minutes after it is mixed up. A biga is ready when it has begun to move just slightly in the center.

PATE FERMENTE

It is a French word for “old dough”. In France, they will often save dough from the previous day’s batch, keep it in the fridge, and then used it in the next day’s batch. Typically, though, home bakers make one by exactly mimicking the proportions of flour, water and salt, and adding just a tiny pinch of yeast. It is then allowed to ferment for a long period of time.

Alternatively, one could even use the same proportions of yeast, but only let it ferment for an hour or so on the counter, and then placing it in the refrigerator. Like a biga, a pate fermente is ready when it just begins to recede in the center.

BENEFITS OF PRE-FERMENTS

There are a number of important benefits to the correct use of preferments, and they all result from the gradual, slow fermentation that is occurring during the maturing of the preferment:

1. **DOUGH STRUCTURE IS STRENGTHENED**

   A characteristic of all preferments is the development of acidity as a result of fermentation activity, and this acidity has a strengthening effect on the gluten structure.

2. **SUPERIOR FLAVOR**

   Breads made with preferments often possess a subtle wheaty aroma, delicate flavor, a pleasing aromatic tang, and a long finish. Organic acids are a natural product of pre-ferments, and they contribute to superior bread flavor.

3. **KEEPING QUALITY IMPROVES**

   There is a relationship between acidity in bread and keeping quality. Up to a point, the lower the pH of a bread, that is, the higher the acidity, the better the keeping quality of the bread.

4. **OVERALL PRODUCTION TIME IS REDUCED**

   To attain the best bread we must give sufficient time for its development. The preferment immediately incorporates acidity and organic acids into the dough, serving to reduce required floor time after mixing.

OVERNIGHT RETARDATION

Overnight retardation is a process in which we proof bread dough slowly in the fridge overnight and then use it next day for final proofing and baking.

This process is highly used by professional bakers as it increases the flavor and texture of breads as well as proofs to be very convenient. Refrigerating the dough overnight develops strength, complexity of flavor and makes the dough less starchy.

BREAD DISEASES

There are certain bread diseases that a bread can acquire due to unfavourable environmental conditions.

ROPE

It is one of the main disease that affect breads. The spores of Bacillus Mesentericus Vulgatus, the micro-organisms are responsible for the development of rope. It is usually present in the flour itself. This is not apparent until the bread is some hours old. This develops in the form of patchiness and the crumb becomes sticky.

This will occur only when the spore is given suitable conditions to develop, increase, grow and so produce an attack of disease. These conditions include warmth, moistness and s deficiency of acid.

This can be prevented by using natural yeast in the making of the bread, as natural yeast will have sufficient acid content to prevent the formation of rope.

MOULDS

It is another common disease that a bread can acquire if stored in a humid and warm environment. In such conditions a green to black hairy growth can be seen on the bread. The moulds are a type of fungus and it can cause foul smell and make the bread unfit for human consumption.

To prevent mould formation on bread, the bread must be stored in a cool and dry environment and if the bread is to be stored for a longer duration, then it can be wrapped in a plastic film and kept frozen until usage.

METHODS OF DOUGH MAKING

There are different methods of making a dough and any method can be adopted as per the given situation. Most common methods for making a dough are:

1. **STRAIGHT DOUGH METHOD**

   This is one of most popular methods used in production of bread and as the name suggests it is simple and straight forward. All the ingredients are mixed together, and the dough is fermented for a predetermined time. The fermentation time of the straight dough depends on the strength of the flour. Strong flour requires more fermentation time to mature adequately. Flours which require 2 to 3 hours for maturing should be used for making bread by straight method. Flours that take very long period for maturing should not be used because during prolonged fermentation periods it is very difficult to control the temperature of the dough and rise in temperature will cause acid taste and flavour in bread.

2. **NO TIME DOUGH METHOD**

   In this method, dough is fermented in the usual manner. It is just allowed a brief period (about 30 mins) for it to recover from the strains of mixing. Since dough is not fermented, the two functions of fermentation (i. e production of gas and conditioning of gluten) are achieved to some extent by increasing the quantity of yeast (2 to 3 times of original quantity) and by making the dough little slacker and warmer. Although it is possible to make fairly acceptable bread by using this method the product has poor keeping quality. Due to the absence of fermentation the gluten and starch are not conditioned sufficiently to retain the moisture.

3. **SALT DELAYED METHOD**

   This a slight variation of straight method, where all the ingredients are mixed except salt and fat. As salt has a controlling effect on enzymatic action on yeast, the speed of fermentation of a salt less dough will be faster, and a reduction in total fermentation time will be faster. The salt is added at the knock back stage. The method of adding salt at the later stage may be according to the convenience of individual baker. It may be sifted on the dough and mixed or it may be creamed with fat. Whatever way is chosen for mixing the salt, only three forth (of actual mixing time) mixing should be given initially and one fourth mixing at the time of adding salt. Due to absence of salt, the fermentation speed is enhanced and gluten is matured in a reasonably shorter time.

4. **SPONGE AND DOUGH METHOD**

   Strong flour take too long for conditioning and should not be used for making bread by straight dough method. For such flours, sponge and dough method is more suitable where the problem of controlling the dough temperature time is not so acute. Flour, proportionate amount of water, yeast and sugar are mixed together. Then all the ingredients are mixed evenly. This sponge is fermented for a pre determined time. The ferment is carried out longest for almost 16 to 17 hours and minimum for an hour. Breads made with this method

have increased flavor, developed by the long fermentation of the sponge as less yeast is needed, because it multiplies during the sponge fermentation.

5. FERMENT AND DOUGH METHOD

This is a variation of sponge and dough method. Very often a bread formula may contain milk, eggs, substantial quantity of fat and sugar. All these ingredients will have a retarding effect on yeast activity. If all the yeast, part of flour, yeast food and sufficient water are mixed together, the yeast gets initially an environment which is conducive to vigorous activity and at the end of fermentation time it is in a fit condition to take on extra load of fermentation in presence of milk, eggs, excessive fat etc. Fermentation time of ferment depends on the formulation of the desired product but very often it becomes a matter of individual preference. A ferment containing milk should be guarded against over fermentation as it will develop more than desired quantity of lactic acid which in turn will affect the flavor, taste and texture of the product

FAULTS IN BREAD MAKING

Some of the common faults which happen during the making of a bread are as follows:

1. **FLAKED CRUST ALSO KNOWN AS FLYING TOPS**
   If fermented dough is left uncovered in an atmosphere which is not saturated with moisture (80-85 per cent), water evaporates from the surface of the dough leaving the skin dry. This skin, once formed, is difficult to eliminate and when a skinny dough is knocked back, scaled, and moulded; the dry skin, breaks off and some which remain on the exterior will get folded into the dough and show as whitish coloured patches which are hard and knotty.

   When moulded dough pieces become skinned and it will give an unsatisfactory bloom of the crust. Also there will be a number of bursts or 'flying tops'.

2. **LACK OF VOLUME**
   Bread not fermented enough has a lack of volume. This fault can be said to be a direct effect of the insufficient ripening of the gluten. Over fermentation may also be a reason for lack of volume in bread. Longer fermentation time increases the acid production giving a very sour taste. This activity will weaken the gluten for lack of volume and large holes. It will also give a bad structure to the baked bread which will begin to crumble easily.

   Breads not proofed for required length of time, gluten not developing due to improper mixing of dough, too much salt in dough, less yeast in the dough, too high oven temperatures are some of the other reasons which affects the volume of a bread.

3. **UNEVEN TEXTURE, SHOWING LARGE IRREGULAR HOLES**
   When the dough is not fermented long enough, the gluten will not reach its maximum extensibility. As the gluten is not fully extended, the loaf will be smaller in volume. Also, some of the smaller gluten strands will break down under the expansion pressure of the gas, creating irregular large sized holes in the baked product.

4. **LACK OF SHINE ON THE CRUST**
   The sheen of the crumb depends upon the structure of the gluten formation, as kneading increases number of fine glossy cell surfaces to reflect the light. Greater the web like structure of the gluten, greater will be the reflection of the light.

5. **STALES RAPIDLY**
   Bread not fermented for required time, not enough salt used in dough or Over proofed bread will result in this kind of fault.

STORAGE OF BREADS

The freshness and the shelf life of a bread loaf is dependent on the way in which we store it. After a bread has been baked and is allowed to cool, from that point onwards the crust and crumb begins to harden over time, which we generally identify as a stale bread.

To avoid excessive drying or staling of bread, it's important to make sure the bread is properly stored so it doesn't prematurely dry up.

STORE IT CUT SIDE DOWN

If you have a half cut bread and you do not want to wrap it yet, you should keep the cut side facing down on a cutting board so that the crumb does not come in direct contact with the air and is prevented from drying up.

WRAP IT IN RESUABLE WRAPS OR PAPER AND PLASTIC BAGS

If you have a hard crusted bread, it better to wrap it in a reusable paper wraps to prevent the crust from becoming soggy and also you save up on wastage as well.

Plastic bags are also a good option to store a soft crusted breads as it retains the moisture level of the crust and prevents it from drying up. Specially where the humidity level is low, it is good practice to store the bread in a plastic bag to prevent the loss of moisture.

DON'T PLACE THE BREAD IN THE FRIDGE

It may seem like a good idea to store the breads in the fridge since it is seen as a food preserver, but storing your bread in the fridge actually cause it to stale faster than if it's kept at room temperature.

FREEZING THE BREAD

For long term storage, freezing the loaf is a good option. By subjecting the bread to very low temperatures the stalling process can be mostly halted.

Freezing individual slices of bread can be better as it can be reheated directly and only the quantity which you need can be taken out at a time. While placing the slices in the freezer, make sure to first keep them in a plastic bag and then keep it in the freezer.

If you have more than one loaves and doesn't plan to slice it all, then you can freeze whole loaves by first wrapping it in cling film and placing them in a plastic bag and then keeping them in the freezer.

FREQUENTLY ASKED QUESTIONS

1. **Can you replace any type of yeast with the other one in the same quantity?**
   All types of yeast are replaceable with each other but not in the same quantity. If you have compressed yeast in a recipe then you will take 1/2 of that amount for active dry yeast and 1/3 of that amount for instant yeast.

2. **How is homemade bread different from commercial bread?**
   First of all, homemade breads don't contain any preservatives or harmful additives which make it a healthy option. Secondly, at home you can make a more nutritious bread than the market brought one.

3. **Can you make bread without refined sugar?**
   Yes you can make bread without adding any refined sugar. You can either add honey or jaggery instead of sugar to feed the yeast. Or you can totally omit any kind of sweetener but then it will take more time for the bread to rise.

4. **Can you use bread flour in place of all purpose flour or vice versa?**
   Yes you can use bread flour in place of all purpose flour. Bread flour has slightly higher protein ratio than the all purpose flour, which gives bread a good rise.

5. **What is over mixing or over kneading and how to avoid it?**
   When the dough is perfectly kneaded, it appears smooth and shiny. If you still continue to knead, it will become inelastic and sticky which means the dough has been over kneaded. To avoid it, try to knead the dough by hand instead of using a mixer as over kneading rarely happens with hands.

6. **How do you check that the dough has been perfectly kneaded?**
   First the dough will appear smooth and shiny. Secondly we check the gluten formation by doing window test, where we take a small part of dough and gently press and stretch it between our fingers. If you can see a thin translucent layer, then the dough is perfectly kneaded, if not, then you have to knead a bit more.

7. **What will happen if the dough has not proofed properly?**
   If the dough hasn't proofed properly, you will end up with dense and heavy bread.

8. **How do you keep the crust soft?**
   Bake it for the mentioned time at the right temperature and brush oil or butter just after the bread is out of the oven.

9. **Can you make bread if you don't have a bread tin?**
   Yes you can easily make a bread loaf even without a tin. Just shape it in a form of a loaf and bake it directly on a baking tray.

10. **Is there a way to form gluten without kneading?**
    Yes you can form gluten even without kneading the dough. A stretch and fold method has to be followed to form the gluten. This is mostly done with highly hydrated dough.

11. How can you replace eggs in any recipe?

To replace eggs in any recipe, you just have to make a mixture of 2 Tbsp Water + 1 Tbsp Oil + ½ Tsp Baking Powder. This mixture is equivalent to 1 whole egg. Use this mixture as per the quantity required.

12. Which type of yeast is best to use and why?

Instant yeast is best to use in any recipe as it has the most concentration of yeast cells. Also, you do not need to activate it first in warm water, rather you can directly add it to the dry ingredients.

13. Can you replace all purpose flour with whole wheat flour?

Yes you can replace a certain part of all purpose flour with whole wheat flour in any recipe to make the bread more nutritious. But that will result in denser bread. Also 100% replacement should not be done as it will result in a very heavy loaf.

WHITE BREAD

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In cups			
Flour	200 g	1 cup + ½ cup	5.4	8	
Sugar	12 g	1 Tbsp	0.69	1.44	WHOLESALE
Salt	3 g	½ Tsp	1	1	
Yeast	8 g	½ Tbsp + 1 Tsp	2.8	2.8	23.47
Improver	3 g	½ tsp	4.89	4.89	
Gluten	3 g	½ Tsp	2.28	2.28	M.R.P.
Water	115-125 g	½ Cup	2.4	2.4	
Butter	10 g	½ Tbsp	3.2	4.5	28.19
Oil	8 g	½ Tbsp	0.8	0.88	
TOTAL			**23.47**	**28.19**	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, collect all the dry ingredients, i.e flour, sugar, salt, yeast, improver and gluten. Now, add water to it and combine to form soft dough.
3. When the dough is formed, transfer it on the counter and start kneading it to form gluten in it. Once the gluten is formed, add in the oil & butter and knead it again till they are completely incorporated. Then transfer it to a lightly greased bowl and keep it for first fermentation for 30 minutes in the proofer.
4. After proofing, degas the dough, then shape it into a loaf and put it in a greased bread tin. Softly spread the dough with your palm so that it touches the sides of the tin.
5. Now cover the lid 90% and keep it for final proofing.
6. When the dough has proofed till the top, cover the lid fully and bake it in a preheated oven for around 25 minutes or until golden brown in color.
7. When the bread has baked, demould it and let it cool on a wire rack.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

MULTIGRAIN BREAD

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In cups			
Flour	100 g	½ cup + ¼ cup	2.7	4	
Whole-wheat flour	20 g	1/8 cup	0.48	0.84	**WHOLESALE**
Ragi flour	5 g	½ Tbsp	0.39	0.39	
Multigrain mix	8 g	1 Tbsp	9.28	9.28	25.53
Sugar	8 g	½ tbsp + ½ tsp	0.46	0.96	
Salt	3 g	½ tsp	1	1	**M.R.P.**
Yeast	5 g	½ Tbsp	1.75	1.75	
Improver	3 g	½ tsp	4.89	4.89	27.77
Gluten	3 g	½ Tsp	2.28	2.28	
Water	70g – 75g	1/3 cup	1.5	1.5	
Oil	8 g	½ Tbsp	0.8	0.88	
TOTAL			**25.53**	**27.77**	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl collect flour, add in whole-wheat flour, Ragi flour, Salt, Sugar, Yeast, Improver, Gluten and soaked multigrain mix.
3. Add water and start kneading the dough to form gluten in it. Once the gluten has formed, add the oil and knead again for 5 minutes. Then keep it for primary fermentation until it gets double in size.
4. When the dough is proofed, degas the dough, put in on the counter and shape it in a form of a loaf, then place it for final fermentation again for 30 min.
5. When the loaf has proofed, brush water on the top and sprinkle multigrain mix on it. Score the bread as demonstrated.
6. Now place the bread in the preheated oven and bake it for around 20 minutes or until golden brown in color.
7. After baking place it on the cooling rack until it reaches room temperature before consuming.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

GARLIC BREAD

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 2
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In cups			
Flour	150 g	1 cup + 1.5 Tbsp	4.05	6.0	
Sugar	9 g	½ Tbsp + ½ Tsp	0.52	1.08	Bread Dough
Salt	2 g	¼ Tsp	1	1	
Yeast	4 g	1 Tsp	1.4	1.4	
Improver	1 g	¼ Tsp	1.63	1.63	
Gluten	1 g	¼ Tsp	0.76	0.76	Garlic Butter
Butter	7 g	½ Tbsp	2.24	3.15	
Milk	96-100 g	¼ cup + 1/8 cup	5.8	6.2	
TOTAL			17.4	21.22	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, collect flour, sugar, salt, yeast, improver and gluten. Add milk to it and start kneading it to form a dough.
3. Once the gluten has been formed, add the butter and knead again to get a soft dough. Place the dough in a lightly greased bowl and keep it for primary fermentation for 20 minutes.
4. Once the dough has been proofed, degas it and keep 50 g of dough aside and divide rest of it into two equal parts. Take one part and spread it using your palm into a rectangular shape.
5. Spread the garlic butter mix in the center and then roll it to form a loaf. Seal the edges by pinching it. Repeat the same process for the other part also.
6. Roll out the 50 g dough ball into a sheet having 5mm thickness and roll the docker over it to form a net pattern.
7. Keep the loaves on a greased baking tray, place the net on them and keep it for proofing for around 25 minutes.
8. Once it has been proved, trim off the excess net, brush garlic butter on top and put it in the oven for baking for about 20 minutes.
9. After it has been baked, allow it to cool on a cooling rack at room temperature.

Roll the docker firmly in one go as you can't roll over the dough again.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

FOR GARLIC BUTTER		COSTING (in Rs.)		NO. OF PORTIONS: 2
INGREDIENTS	**QUANTITY**	**WHOLESALE**	**M.R.P.**	
Butter	30 g	9.6	13.5	
Roasted Garlic	2 g	2.3	2.3	
Garlic Powder	1 g	1.09	1.09	
Oregano	1 g	0.12	2	
Chilli Flakes	1 g	0.13	1.9	
Black Pepper	A pinch	0.3	0.3	
TOTAL		**13.54**	**21.09**	**INSTRUCTIONS**
METHOD **1.** In a bowl, take soft butter, add all the other ingredients to it and mix properly.				Save some portion for top garnish.

COST PER PORTION (in Rs.)		
ELEMENTS	**WHOLESALE**	**M.R.P.**
Bread dough	8.4	10.31
Garlic Butter	6.77	10.54
TOTAL	**15.77**	**20.85**

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

ITALIAN DOUGHNUTS

FOR THE DOUGH (EGGLESS)			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In cups			
Flour	143 g	1 cup + ½ Tbsp	3.86	5.72	
Sugar	10 g	½ Tbsp + 1 Tsp	0.58	1.2	Fried Doughnut
Salt	3 g	½ Tsp	0.06	0.06	
Yeast	2 g	1 Tsp	0.7	0.7	
Baking soda	1 g	¼ Tsp	0.12	0.52	
Milk	65 g	¼ cup	3.77	4.03	Caramel Ganache
Water	15 g	1 Tbsp	0.3	0.3	
Butter	7 g	½ Tbsp	2.24	3.15	Chocolate Glaze
Oil	4g	1 tsp	0.5	0.55	
TOTAL			**12.13**	**16.23**	INSTRUCTIONS

METHOD

1. In a bowl, collect all the dry ingredients. Add in Milk, water and knead to form a dough.
2. Add the soft butter and oil, and form a soft dough. Now divide the dough into 5 equal parts, roll them into balls and keep on a flour dusted tray and let it proof for 30-40 minutes in the proofer.
3. Heat oil in a saucepan to 180c. Once the doughnuts have risen, place the doughnuts one-by one to fry. Let one side fry till golden brown and flip to cook the other side.
4. Once the doughnuts are cooled down, pierce it from one side using a toothpick, and fill ganache in the center using a piping bag.
5. Now dip one side of the doughnuts in dark chocolate and sprinkle chopped hazelnuts on top.

Let the doughnuts cool down before garnishes.

FRYING TEMPERATURE

180°C

FOR THE DOUGH (EGG)			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In cups			
Flour	143 g	1 cup + ½ Tbsp	3.86	5.72	
Sugar	10 g	½ Tbsp + 1 Tsp	0.58	1.2	Fried Doughnut
Salt	3 g	½ Tsp	0.06	0.06	
Yeast	2 g	1 Tsp	0.7	0.7	
Milk	65 g	¼ cup	3.77	4.03	Caramel Ganache
Egg White	16 g	-	2	2	
Egg Yolk	1 no.	-	2	2	Chocolate Glaze
Butter	7 g	½ Tbsp	2.24	3.15	
TOTAL			15.21	18.86	INSTRUCTIONS

METHOD

1. In a bowl, collect all the dry ingredients. Add in Milk, egg white, egg yolk and knead to form a dough.
2. Add the soft butter, and form a soft dough. Now divide the dough into 5 equal parts, roll them into balls and keep on a flour dusted tray and let it proof for 30-40 minutes in the proofer.
3. Heat oil in a saucepan to 180c. Once the doughnuts have risen, place the doughnuts one-by one to fry. Let one side fry till golden brown and flip to cook the other side.
4. Once the doughnuts are cooled down, pierce it from one side using a toothpick, and fill ganache in the center using a piping bag.
5. Now dip one side of the doughnuts in dark chocolate and sprinkle chopped hazelnuts on top.

Let the doughnuts cool down before garnishes.

FRYING TEMPERATURE

180°C

FOR CARAMEL GANACHE			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	
	In gm.	In Cups			
Caster Sugar	13 g	1 Tbsp	0.75	1.56	
Melted Butter	4 g	1 Tsp	1.28	1.80	
Fresh cream	26 g	1 Tbsp + 1 Tsp	4.68	5	
Glucose	2 g	-	0.21	0.21	
Milk couverture	20 g	-	9.6	9.8	
TOTAL			16.52	18.37	INSTRUCTIONS

METHOD

1. Take sugar in a saucepan and heat it till it reaches amber color. Add melted butter to it and mix.
2. Remove it from heat and add warm cream and hot glucose to it. At last add it to milk chocolate.

Do not heat sugar beyond amber color. It will taste bitter.

FOR GARNISH		COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	**QUANTITY**	**WHOLESALE**	**M.R.P.**	
Dark couverture	50 g	22.75	23.25	
Oil	10 g	1.01	1.16	
Hazelnuts	5 g	6.25	7	
TOTAL		**30.01**	**31.41**	**INSTRUCTIONS**

METHOD

1. Melt the chocolate and add oil to it.
2. Roughly chop the hazelnuts.

COST PER PORTION (in Rs.)					
TYPE	**COST**	Dough	Caramel Ganache	Chocolate Glaze & Garnish	**TOTAL**
Egg	**WHOLESALE**	3.04	3.30	6	**12.34**
	M.R.P.	3.77	3.67	6.28	**13.72**
Eggless	**WHOLESALE**	2.42	3.30	6	**11.72**
	M.R.P.	3.24	3.67	6.28	**13.19**

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

CINNAMON ROLLS

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In cups			
Flour	185 g	1 cup + 1/3 cup	4.99	7.4	Cinnamon Bun Dough
Sugar	25 g	1/8 cup	1.45	3	
Salt	2 g	½ Tsp	1	1	Cinnamon Sugar Filling
Yeast	2 g	1 Tsp	0.7	0.7	
Gluten	A pinch	1/8 tsp	0.5	0.5	Cream Cheese Frosting
Improver	A pinch	1/8 tsp	0.5	0.5	
Baking Powder	1 g	¼ Tsp	0.16	0.3	
Melted butter	28 g	2 Tbsp	8.96	12.6	
Milk	120 g	1/3 cup + 1/8 cup	6.96	7.44	
TOTAL			25.22	33.44	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, take all the dry ingredients together and give it a stir. Add the milk and start kneading to form a soft dough.
3. Once the gluten has been formed, add in the melted butter and knead again till you get a soft and smooth dough.
4. Transfer the dough into a lightly greased bowl and keep it for primary fermentation for 20 minutes.
5. Now degas the dough and spread it in a shape of a rectangle. Place the filling in the center and roll it lengthwise.
6. Using a thread, cut it into 5 portions of 1.5 inch each. Place the rolls in a 6 inch round tin and keep it for final proofing for about 20-25 minutes.
7. Bake it in a preheated oven for 30 minutes or till golden brown in color.
8. Once baked, transfer it on a cooling rack and drizzle frosting on top.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

FOR THE FILLING			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	
	In gm.	In Cups			
Brown Sugar	50 g	¼ Cup	3.25	6.5	
Unsalted Butter	50 g	1/8 Cup + 1 Tbsp + ½ Tsp	16	22.5	
Cinnamon Powder	5 g	1 tsp	1	1	
TOTAL			20.25	30	INSTRUCTIONS

METHOD

1. In a bowl, cream together soft butter and brown sugar together. Add in the cinnamon powder and mix properly.

FOR THE FROSTING			COSTING (in Rs.)		NO. OF PORTIONS: 5
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	
	In gm.	In Cups			
Cream Cheese	25 g	-	15.75	28.12	
Unsalted Butter	8 g	½ Tbsp	2.56	3.6	
Milk	15 g	1 Tbsp	0.87	0.93	
Vanilla Essence	2 drops	¼ Tsp	0.5	0.5	
Icing Sugar	40 g	-	2.4	5.04	
TOTAL			22.08	38.19	INSTRUCTIONS

METHOD

1. In a bowl, take cream cheese and cream it using a spatula. Once soft, add in the unsalted butter, milk and vanilla essence and cream it together.
2. Now add the icing sugar in parts and cream it to form a runny mixture.

COST PER PORTION (in Rs.)		
ELEMENTS	WHOLESALE	M.R.P.
Bread dough	5.04	6.68
Cinnamon filling	4.05	6
Cream cheese frosting	4.41	7.63
TOTAL	13.5	20.31

NOTE		
Shelf life of	Room temperature	Freezer
Bread dough	-	1 month
Baked bread	3 days	-

CHOCOLATE BABKA

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	**QUANTITY**		**WHOLESALE**	**M.R.P.**	**ELEMENTS**
	In gm.	**In cups**			
Flour	150 g	1 cup + 1.5 Tbsp	4.05	6	
Sugar	38 g	1/8 cup + 1 Tbsp	2.09	4.56	Bread Dough
Salt	1 g	¼ Tsp	1	1	
Yeast	4 g	1 Tsp + ¼ Tsp	1.4	1.4	
Improver	2 g	¼ Tsp	1.5	1.5	
Gluten	2 g	¼ Tsp	1.5	1.5	Chocolate Filling
Water	20 g	1 Tbsp + 1 Tsp	0.4	0.4	
Milk	50 g	1/8 cup + 1 Tbsp	2.8	3.09	
Oil	3 g	1 Tsp	0.3	0.33	
Unsalted butter	21 g	1 Tbsp + 1 Tsp	6.72	9.45	
Vanilla essence	2-3 drops	¼ Tsp	0.5	0.5	
TOTAL			**24.46**	**29.73**	**INSTRUCTIONS**

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, mix together all the dry ingredients. Add milk, water & vanilla essence and make a soft dough.
3. Now, knead it on a working surface for 5-6 minutes until gluten is formed. Add the butter and oil and knead again. Transfer it to a greased bowl and cover with cling wrap. Leave it for proofing for 30 minutes.
4. When the dough has doubled in size, degas it and knead it for 1-2 minutes.
5. Spread the dough on the surface, and put the ganache in the centre and give a loaf shape.
6. Now cut the loaf from the center, leaving one end intact and give the braid shape as shown.
7. Now roll the braid inside starting from one end and form a round shape. Put the loaf in the 6 inch round tin and put it for proofing
8. Once it has proofed, bake it for 20 to 30 min or until golden brown in color. Place it on cooling rack after baking.

Do not spread the ganache filling till the edges as it will spill out while rolling.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

FOR GANACHE FILLING		COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	**QUANTITY**	**WHOLESALE**	**M.R.P.**	
Dark couverture	40 g	18.2	18.6	
Cream	20 g	3.6	3.84	
TOTAL		**21.8**	**22.44**	**INSTRUCTIONS**
METHOD 1. Chop the chocolate and warm the cream in a bowl. 2. Add the warm cream to the chocolate and mix well to form a ganache. 3. Let it cool in the fridge.				Do not boil the cream.

COST PER PORTION (in Rs.)		
ELEMENTS	**WHOLESALE**	**M.R.P.**
Bread dough	24.46	29.73
Chocolate filling	21.8	22.44
TOTAL	**46.26**	**52.17**

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

WHOLE WHEAT BURGER BUNS

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 4
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In Cups			
Flour	110 g	½ cup + 1/3 cup	2.97	4.4	
Whole wheat flour	90 g	½ cup + 1/8 cup	2.16	3.78	WHOLESALE
Sugar	12 g	1 Tbsp	1.5	3.15	3.5
Salt	4 g	½ Tsp + ¼ Tsp	1	1	
Yeast	8 g	½ Tbsp + 1 Tsp	0.2	0.37	
Improver	3 g	½ tsp	0.5	0.5	M.R.P
Gluten	3 g	½ Tsp	0.5	0.5	4.95
Water	115 g – 125g	½ Cup + 1 Tsp	2.5	2.5	
Butter	8 g	½ tbsp	2.56	3.6	
Black Sesame seed	5 g	½ Tbsp	-	-	
TOTAL			13.89	19.8	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, take all the dry ingredients and give it a stir. Add the water gradually and start kneading to form a dough. Once the gluten has developed add the butter and knead again to form a soft dough.
3. Now divide the dough in equal portions of 90 g each. Roll these into balls and keep them on a baking tray and put the tray in the proofer for around 30 minutes.
4. Once proofed, spray water on them and sprinkle sesame seeds on top.
5. Bake them in preheated oven for about 20 minutes or until golden brown.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

BREADSTICKS

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 20
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In Cups			
Flour	250 g	1 Cup + ½ Cup + 1/3 Cup	6.75	10	WHOLESALE 0.84
Sugar	15 g	1 Tbsp	1.87	3.93	
Salt	4 g	½ Tsp + ¼ Tsp	1	1	M.R.P 1.21
Yeast	2 g	½ Tsp	0.05	0.09	
Water	125 g	½ Cup + ½ Tbsp + 1 Tsp	2.5	2.5	
Butter	15 g	1 tbsp	4.8	6.75	
Poppy seed	5 g	½ Tbsp	-	-	
TOTAL			16.97	24.27	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, collect all the dry ingredients, i.e flour, sugar, salt and yeast. Now, add water to it and combine to form a stiff dough.
3. When the dough is formed, transfer it on the counter and start kneading it to form gluten in it. Once the gluten is formed, add the butter and knead again to get a smooth dough. Keep it covered on the counter for 15 mins.
4. Using a rolling pin, flatten it a bit and cut out long portions of 20 g each.
5. Now elongate them into a long rope, about the size of a big baking tray. Keep them on the back of the tray and trim the edges.
6. Let it proof for about half hour and sprinkle poppy seeds on it by spraying some water.
7. Bake it for 15-20 minutes or until golden brown in color.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

HOT DOGS

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 4
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In Cups			
Flour	125 g	½ cup + 1/3 cup + 1Tbsp	3.37	5	3
Sugar	4 g	1 Tsp	0.5	1.05	
Salt	3 g	½ Tsp	1	1	
Yeast	2 g	½ Tsp	0.05	0.09	
Improver	1 g	1/4 Tsp	0.16	0.16	M.R.P
Gluten	1 g	¼ Tsp	0.16	0.16	3.92
Milk	70 g – 80 g	¼ Cup + 1 Tbsp	4.2	4.63	
Butter	8 g	½ tbsp	2.56	3.6	
Sesame seed	5 g	½ Tbsp	-	-	
TOTAL			12	15.69	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, take all the dry ingredients together and start adding the milk gradually.
3. Once all the milk has been incorporated, transfer the dough on the surface and start kneading it. Keep kneading till a soft dough is formed. Then add the butter and knead again.
4. Keep the dough for proofing for about 1 hour or until it doubles in size.
5. Now degas it and divide the dough into 4 equal portions.
6. Flatten one portion and give the shape of a loaf and elongate it to about 7 inches. Repeat with the other portions as well.
7. Keep on a baking tray and let them proof until it doubles in size.
8. Once proofed fully, brush with egg/milk and sprinkle sesame seeds on top.
9. Bake in a preheated oven for about 15-20 minutes or until golden brown in color.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

CIABATTA

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 4
INGREDIENTS	**QUANTITY**		**WHOLESALE**	**M.R.P.**	**ELEMENTS**
	In gm.	**In cups**			
Flour	200 g	1 cup + ½ cup	5.4	8	Poolish
Salt	3 g	½ Tsp	1	1	
Yeast	6 g	½ Tbsp + ½ Tsp	2.1	2.1	
Improver	4 g	1 Tsp	6.52	6.52	
Gluten	2 g	¼ Tsp	1.52	1.52	Bread dough
Caramelized Onion	20 g	-	1.7	2.1	
Roasted Garlic	2 g	-	2.3	2.3	
Thyme	1 g	¼ Tsp	7.25	7.25	
Poolish	40 g	-	1.11	1.37	
Water	170 g	½ cup + ¼ cup	3.4	3.4	
Oil	20 g	1 Tbsp + ½ Tbsp	2	2.2	
TOTAL			**34.3**	**37.76**	**INSTRUCTIONS**

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl of a stand mixer, take all the dry ingredients, add caramelized onion, roasted garlic and thyme. Add the polish and water and using a paddle attachment, knead for 8-10 minutes or until the dough comes together on the paddle.
3. Now add the oil and knead for 1 minute more. With greased hands, take out the dough into a well greased 7 inch square tin.
4. Spread it with your fingers and keep it for fermentation in the proofer. Once proofed, gently pick up the dough from one side and fold it inside towards the centre. Now pickup the other side as well and fold it till the end. Rotate the tin and repeat the same fold for the other side as well. Gently spread the dough with your fingers and keep it again in the proofer for final proofing.
5. After the final proofing, transfer the dough on a floured surface, and dust flour on the dough as well.
6. Now carefully cut out small rectangles, and transfer them on a baking tray without deflating them
7. Bake it in a preheated oven for 30-40 minutes.

Be careful while shaping, it could lose air pockets and deflate.

OVEN TEMPERATURES

OTG

200˚C (upper rod + lower rod + fan)

DECK OVEN

Upper temperature – 200˚C

Lower temperature – 200˚C

UNOX

180˚C, Fan speed – 2, Humidity – 60%

FOR POOLISH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	
	In gm.	In cups			
Flour	20 g	1/8 cup	0.54	0.8	
Water	20 g	1 Tbsp + ½ Tbsp	0.4	0.4	
Yeast	A pinch		0.17	0.17	
TOTAL			1.11	1.37	INSTRUCTIONS

METHOD

1. In a bowl, combine flour water and yeast, and mix it properly.
2. Keep it in the proofer for 30 minutes or till bubbles start to form up.

COST PER PORTION (in Rs.)		
ELEMENTS	WHOLESALE	M.R.P.
Ciabatta	**8.57**	**9.44**

NOTE		
Shelf life of	Room temperature	Freezer
Bread dough	-	1 month
Baked bread	2-3 days	-

BAGUETTE

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In cups			
Flour	200 g	1 cup + ½ cup	5.4	8	Poolish
Salt	5 g	1 Tsp	1	1	
Yeast	7 g	½ Tbsp + ½ Tsp	1.75	1.75	
Improver	3 g	½ Tsp	4.89	4.89	
Gluten	2 g	½ Tsp	1.52	1.52	Bread dough
Semolina	7 g	½ Tbsp	0.42	0.42	
Poolish	70 g	-	1.81	2.27	
Water	150 g	½ cup + 1/8 cup + ½ Tbsp	3	3	
TOTAL			19.79	22.85	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 180˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl combine flour, improver, gluten, salt, yeast, improver, semolina and poolish mixture. Add water to it and start kneading to form a dough.
3. Once the dough is formed, transfer it to the surface and knead till the gluten is formed .Then transfer the dough to a greased bowl, and let the dough rest for 30 minutes in the proofer.
4. When the dough is proofed, degas it with your fingers. Spread it on a flour dusted surface and spread it into a rectangle shape. Now give it the first fold to incorporate air. Keep it again in the proofer for 30 minutes,
5. Now shape the dough in the form of a baguette by folding it in a loaf shape and elongating it.
6. Place the bread for final fermentation in a flour dusted baguette tray. When the dough is fully proofed again, score it diagonally, then place it in the oven for baking until golden brown in color with crispy crust.

OVEN TEMPERATURES

OTG
180˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 180˚C
Lower temperature – 180˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

FOR POOLISH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	
	In gm.	In cups			
Flour	35 g	¼ Cup	0.94	1.4	
Water	35 g	1/8 Cup + ½ Tbsp	0.7	0.7	
Yeast	A pinch	1/8 Tsp	0.17	0.17	
TOTAL			1.81	2.27	INSTRUCTIONS

METHOD

1. In a bowl, combine flour water and yeast, and mix it properly.
2. Keep it in the proofer for 30 minute or till bubbles start to form up.

COST PER PORTION (in Rs.)		
ELEMENTS	WHOLESALE	M.R.P.
Bread dough	19.79	22.85
TOTAL	**19.79**	**22.85**

NOTE		
Shelf life of	Room temperature	Freezer
Bread dough	-	1 month
Baked bread	3 days	-

FOUGASSE

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (In Rs.)
	In gm.	In Cups			
Flour	225 g	1 Cup + ½ Cup + 1/8 Cup	6.07	9	
Sugar	5 g	½ Tbsp	0.29	0.6	WHOLESALE
Salt	3 g	½ Tsp	0.06	0.06	
Yeast	3 g	1 Tsp	1.05	1.05	**20.69**
Improver	1 g	¼ Tsp	1.63	1.63	
Gluten	1 g	¼ Tsp	0.76	0.76	M.R.P
Thyme	1 g	¼ Tsp	3.63	3.63	
Basil	1 g	¼ Tsp	1	1	**26.01**
Parsley	1 g	¼ Tsp	1	1	
Water	115-125 g	½ Cup + ½ Tbsp	2.4	2.4	
Olive Oil	8 g	½ Tbsp	2.8	4.88	
TOTAL			**20.69**	**26.01**	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, mix all the dry ingredients together and add water to form a dough. When the gluten is formed, add olive oil and knead again to form a firm dough.
3. Keep the dough in a lightly greased bowl and place it in the proofer for primary fermentation.
4. After the dough has almost doubled up in size, transfer it on the counter, degas it and flatten it using your hands into an oval shape.
5. Now give the cuts using a dough scraper to give a unique design to the bread.
6. Now place it on a baking tray and let it rest for 10-15 minutes.
7. Transfer the tray in a preheated oven and bake it for 20-30 minutes or until golden brown.

Make the slits carefully and broad.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

FOCACCIA

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	COST PER PORTION (in Rs.)
	In gm.	In Cups			
Flour	125 g	½ Cup + 1/3 Cup + 1 Tbsp	3.37	5	WHOLESALE
Salt	2 g	½ Tsp	1	1	13.61
Yeast	4 g	1 Tsp	1.4	1.4	
Improver	1 g	¼ tsp	1.63	1.63	
Gluten	2 g	¼ Tsp	1.52	1.52	M.R.P.
Oregano	2 g	½ Tsp	0.25	4	
Black olives	10 g	1 Tbsp	1.1	2	22.05
Poolish	13 g	-	0.36	0.44	
Water	90 g	1/3 Cup + 1 Tbsp	0.18	0.18	
Olive Oil	8 g	½ Tbsp	2.8	4.88	
TOTAL			13.61	22.05	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a large bowl mix together the salt, yeast, flour, add in your improver, gluten, oregano and olives. Add the poolish mixture and pour half the water and start to form a dough, add rest of the water to achieve a soft dough. Add the oil and knead for a few minutes more. Place the dough in a greased bowl, cover it with plastic wrap, and let it rest until it doubles in size.
3. After the dough has risen, place it on the surface and degas it lightly with your fingers.
4. Spread the dough by pressing on an oiled surface with greased hands into a rectangular form. Give the first fold by gently picking up the dough from one side and folding it inside towards the centre. Now pickup the other side as well and fold it till the end. Rotate the tin and repeat the same fold for the other side as well.
5. Now with your fingers mark light dimples all over the dough and flatten it (these dimples are made to hold oil that you will drizzle later).

Do not put too many vegetables at once as they won't stick to the dough. After baking , they will come off.

OVEN TEMPERATURES

OTG

200˚C (upper rod + lower rod + fan)

DECK OVEN

Upper temperature – 200˚C

Lower temperature – 200˚C

UNOX

160˚C, Fan speed – 1, Humidity – 0

6. Place it in an oiled baking tin and spread it so that it touches the walls of the tin. Now place your desired toppings on the top and let it rest for 20-30 min. **7.** After the dough has risen, drizzle some oil on the top . **8.** Bake the bread in a preheated oven for 30 min or until golden brown in color. Serve it warm.	

FOR POOLISH			**COSTING (in Rs.)**		**NO. OF PORTIONS:** 1
INGREDIENTS	**QUANTITY**		**WHOLESALE**	**M.R.P.**	
	In gm.	**In Cups**			
Flour	20 g	1/8 Cup	0.54	0.8	
Water	20 g	1 Tbsp + ½ Tbsp	0.4	0.4	
Yeast	A pinch		0.17	0.17	
TOTAL			**1.11**	**1.37**	**INSTRUCTIONS**

METHOD

1. In a bowl, combine flour water and yeast, and mix it properly.
2. Keep it in the proofer for 30 minute or till bubbles start to form up.

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

PANE BIANCO

FOR THE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In Cups			
Flour	150 g	1 Cup + 1.5 Tbsp	4.05	6	Dough
Salt	2 g	½ Tsp	1	1	
Yeast	3 g	1 Tsp	1.05	1.05	
Improver	1 g	¼ Tsp	1.63	1.63	
Gluten	1 g	¼ Tsp	0.5	0.5	Filling
Water	33 g	1/8 Cup + 1 Tsp	0.66	0.66	
Milk	35-40 g	1/8 Cup + ½ Tbsp	2.32	2.48	
Olive Oil	20 g	1 Tbsp + 1 Tsp	7	12.2	
TOTAL			18.21	25.52	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, take all the dry ingredients and add milk and water to form a dough. Add olive oil after the gluten has formed and knead again to make a soft dough.
3. Place it in the proofer for first fermentation for 30 minutes.
4. Now take out the dough, transfer it on the counter and degas it. Roll it in the shape of a rectangle and place the filling in the center and lengthwise roll it into a log shape sealing the edges with your fingers.
5. Now milk wash the top side and make a 1 cm deep cut lengthwise, leaving just the edges.
6. Keeping the cut side up, form an "S" shape. Tuck both ends under the center of the "S" to form a "8" and pinch the ends together to seal.
7. Keep it for final proofing in the proofer till it doubles up.
8. Bake it in a preheated oven for about 30 minutes or until golden brown in color.

Tuck the ends of the dough while shaping tightly so that it does not open later.

OVEN TEMPERATURES

OTG

200˚C (upper rod + lower rod + fan)

DECK OVEN

Upper temperature – 200˚C

Lower temperature – 200˚C

UNOX

160˚C, Fan speed – 1, Humidity – 0

FOR THE FILLING		COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	**QUANTITY**	**WHOLESALE**	**M.R.P.**	
Tomato	10 g	0.35	0.4	
Jalapenos	10 g	5	5	
Black Olives	5 g	1.2	2.2	
Basil	5 g	11	1	
Cheddar	20 g	6.6	10	
TOTAL		**14.15**	**18.6**	**INSTRUCTIONS**

METHOD

1. Chop all the vegetables.
2. Grate the cheese and keep aside.

COST PER PORTION (in Rs.)		
ELEMENTS	**WHOLESALE**	**M.R.P.**
Bread dough	18.21	25.52
Filling	14.15	18.6
TOTAL	**32.36**	**44.12**

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

RYE BREAD

FOR THE RYE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In Cups			
Dark Rye Flour	100 g	½ Cup + ¼ Cup	50	50	
Sugar	2 g	½ Tsp	0.17	0.24	
Salt	3 g	½ Tsp	1	1	
Yeast	3 g	1 Tsp	1.05	1.05	
Water	50-60 g	¼ Cup	1.2	1.2	
Oil	5 g	1 Tsp	0.5	0.58	
TOTAL			**53.92**	**54.07**	INSTRUCTIONS

METHOD

1. Pre-heat the oven at 200˚C **(OTG mode: upper rod + lower rod + fan)**.
2. In a bowl, take all the dry ingredients, add water gradually and start kneading the dough. Make sure not to add too much water. Then add the oil and knead again for 5 minutes.
3. Transfer it to a greased bowl and keep it for proofing.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

FOR THE WHITE DOUGH			COSTING (in Rs.)		NO. OF PORTIONS: 1
INGREDIENTS	QUANTITY		WHOLESALE	M.R.P.	ELEMENTS
	In gm.	In Cups			
Flour	150 g	1 Cup + 1.5 Tbsp	4.05	6	
Sugar	5 g	1 Tsp	0.29	0.6	
Salt	2 g	½ tsp	0.04	0.04	
Yeast	5 g	½ Tbsp	1.75	1.75	
Improver	1 g	¼ Tsp	1.63	1.63	
Gluten	1 g	¼ Tsp	0.76	0.76	
Water	85 g	1/3 Cup + ½ Tbsp	1.7	1.7	
Oil	5 g	1 tsp	0.5	0.55	
TOTAL			10.72	13.03	INSTRUCTIONS

METHOD

1. In a bowl, take all the dry ingredients, add water gradually and start kneading the dough. When the gluten has formed, add the oil and knead again for 5 minutes.
2. Transfer it to a greased bowl and keep it for proofing.

OVEN TEMPERATURES

OTG
200˚C (upper rod + lower rod + fan)
DECK OVEN
Upper temperature – 200˚C
Lower temperature – 200˚C
UNOX
160˚C, Fan speed – 1, Humidity – 0

ASSEMBLY

1. Once both the doughs have been prooved, degas them and divide each of them equally into two parts.
2. Now flatten all the portions and keep them one by one on top of each other alternatively, starting with white dough as first layer.
3. Now flatten it a bit, and shape it into a loaf. Place it in a bread tin and keep for proofing for 30-40 minutes.
4. Bake it in a preheated oven for about 30 minutes or until golden brown in color.
5. Let it cool on a wire rack after baking.

COST PER PORTION (in Rs.)		
ELEMENTS	**WHOLESALE**	**M.R.P.**
Rye dough	53.92	54.07
White Dough	10.72	13.03
TOTAL	**64.64**	**67.1**

NOTE		
Shelf life of	**Room temperature**	**Freezer**
Bread dough	-	1 month
Baked bread	3 days	-

SELLING PRICE RANGE

PRODUCT		SELLING PRICE PER PORTION (in Rs.)
1.	White bread	35 - 45
2.	Multigrain bread	50 - 65
3.	Garlic bread	24 – 32
4.	Italian doughnuts	20 – 30
5.	Cinnamon rolls	25 – 35
6.	Chocolate babka	100 – 120
7.	Whole wheat burger buns	10 – 15
8.	Breadsticks	2 - 5
9.	Hot Dogs	8 - 14
10.	Ciabatta	15- 25
11.	Baguette	65-75
12.	Fougasse	50 - 60
13.	Focaccia	40 - 66
14.	Pane Bianco	60 - 75
15.	Rye bread	90 - 110