**Unit Four**: **Bakery & confectionary (syllabus)**

* Yeast breads
* Types of dough
* Straight dough method
* Sponge dough method
* ingredients & their function

 Yeast

 Salt

Liquid

 Sweeteners

Shortening

Eggs

Pastry dough

 Wheat dough

 pie pastry dough

Puff pastry dough

Cookies dough

Cakes & icing

* Basic mixing methods

**Yeast breads**

Yeast is a living organism. While you might not see it moving around in front of you, this single-celled organism can reproduce and rapidly multiply once it is exposed to warmth, liquids, and sugar and flour. Yeast breads all rely on yeast as a leavening agent and come in two types -- batter and kneaded. Batter breads, although they aren't kneaded, still require time to rise and have a coarser texture than kneaded breads, which are smooth.

**Five types of yeast breads**

**Grain Breads**

Grain breads have a heavy, dense texture. Because they are often made with whole grains, they are healthier than your typical white bread. A grain bread can be made from a variety of mixtures including rye, wheat, buckwheat, barley, potato and oat. These are kneaded breads that you can make by hand or in a bread maker. Whole wheat sandwich bread, for example, is a grain bread.

## White Breads

White breads are soft, fluffy and most associated with sandwiches. These are available in American-style, a soft and airy white bread; French, a spongy, chewier bread; and Italian, a crusty exterior and soft, chewy inside. Other white yeast breads include pizza dough and breadsticks. White breads are kneaded, and can be made by hand or in a bread maker.

**Sweet Breads**

Sweet breads offer a light, airy texture and combine flour, yeast, liquid, fat and sugar to give it that sweet taste. Some types of sweet breads include cinnamon rolls, brioche, hot-cross rolls and sweet rolls. These can be served with breakfast, used for sandwiches or made into a dessert. They’re versatile and are considered kneaded breads.

**Bagels**

Bagels are a type of batter yeast bread. However, they require a preparation that is different form most yeast breads. The dough is allowed to rise on its own, then it is punched down and shaped into the classic ring shape. To get that chewy texture, bagels are boiled in water, then baked. Out of the water bath, bagels can be topped with seeds, cinnamon and sugar, or toasted nuts.

**Artisan Breads**

Artisan breads, also known as hearth breads, bake in the oven on a stone or in a wood-fired hearth free form -- no pan required. These breads have a crispy crust and soft inside because they're a kneaded yeast bread. Some common types of hearth breads include baguettes, batard, semolina bread, rye bread and French loaves. Hearth breads can be made with a variety of grains, including wheat, buckwheat, semolina and sunflower seed.

**Types of dough**

Dough is made out of the combination of flour with some liquid, usually water, but it can also be made with milk. Flour nowadays can be made out of some type of cereal grain such as wheat, barley, rice and also out of some type of nut or seed such as almonds, chestnuts, carobs….

Creating the dough is the first step towards making products such as pies, breads, cakes, cookies, sweet breads, pasta….

There are different types or categories of dough, depending on their characteristics. The important characteristics being the percentage of moisture in the dough, whether it contains yeast or not and whether or not it has any fats.

Let’s take a closer look at the different types of dough

**Puff Pastry**

It is made with butter or any other vegetable fat but it needs to be created with a different sort of process…. so that the butter can be in layers in between the dough. As it bakes, the butter melts, the water turns in to steam and separates the layers of dough giving the puff pastry its characteristic flaky layering.

It is a very difficult process for the inexperienced home chef and is better left to the professionals for the best results of course, the puff pastry made with butter is also the most flavourful It is used to make mille feuilles (napoleons) or other pies that can be sweet or savory.

**Kourou Dough**

Another dough made with butter along with eggs and sometimes milk. It is created in a different manner, which gives it a very crunchy result as it bakes. This type of dough is used to make pies, turnovers and even tarts. It is a very rich dough that is very flavorful.

**Croissant Dough**

Imagine a puff pastry dough but with yeast for added puffiness It is exceptionally difficult to prepare ,since it is very difficult to get the desired results. So allow the professionals to get it right since it takes a long time to prepare between resting and cooling. The process is generally quite intricate.

**Phyllo Dough**

Light, thin and delectable…. It is made with flour and water along with great dexterity so that it can become so thin, fluffy and crunchy

Perfect for pies and more traditional sweets like baklava of course if some vegetable fat is added a thicker version of phyllo dough is created. This type of phyllo dough is perfect for pies, especially ground meat pies and other more rustique versions. You can also find new types of phyllo dough available that are made with olive oil that give a more traditional flavor and also whole wheat dough!

Sw**eet Dough**

 These types of doughs are fortified with butter, eggs, yeast etc. They need a long time to rise and generally not for the novice in the kitchen. You CAN try making my sweet bread though! Great for making sweet breads, babka, monkey bread etc…

**Pasta Dough**

3 ingredients: Flour, salt and eggs. It is a hard dough and needs a lot of kneading in order to moisten the flour properly so that it is able to be rolled out in to a sheet.

**Bread Dough**

It can be made with a variety of wheats and various amounts of water along with yeast. It needs to kneaded very well in order for gluten (protein) to be created so that a nice bread can be made. A different taste and of course a different texture can be given depending on what type of flour is used.

There are also some type of breads that substitute yeast for other types of leaveners such as baking soda. These are called soda breads. Doughs are also categorized according to whether or not they contain fats, such as butter or other vegetable fats. Doughs that contain fats do not depend on the creation of gluten so they do not need too much kneading or mixing. You might have noticed that the recipes for cookies, cakes, tarts, etc. suggest that you do not overbeat the ingredients. The simplest of these types of doughs is the tart dough that contains flour, butter, eggs, water and salt. Of course if they contain sugar, they are used to make sweet tarts. There are also tarts with different amounts of butter. The more amount of butter, the tastier it is but it is also harder to work with. In some cases, some tart recipes call for water with a small amount of vodka. It is said that as the vodka evaporates it will make the dough even crunchier!

**Straight dough method**

Straight dough is a single-mix process of making bread. The dough is made from all fresh ingredients, and they are all placed together and combined in one kneading or mixing session. After mixing, a bulk fermentation rest of about 1 hour or longer occurs before division. It is also called the direct dough method.

**Sponge dough method**

The sponge and dough method is a two-step bread making process: in the first step a sponge is made and allowed to ferment for a period of time, and in the second step the sponge is added to the final dough's ingredients, creating the total formula.

Sponge ferment is usually a sticky process that uses part of the flour, part or all of the water, and part or all of the yeast of a total- or straight-dough formula. Highly liquid sponges of batter consistencies are mixed with a whip, spoon, or fork. Lower hydration, stiffer sponges are lightly mixed or kneaded just until the dough begins to develop. The sponge is allowed to rest and ferment for a period of time in an environment of a desired temperature and humidity. When the sponge's fermentation time has elapsed or it has reached a desired volumetric growth characteristic, the *final dough's* ingredients are added. The *gluten is developed* in the mixing or kneading process, and it may then be processed through further *work* and *rest* cycles before being *proofed* then baked.

**Ingredients & their function**

**Yeas**t is a living organism of the fungal family of plants, which changes sugar into CO2 (carbon di oxide), alcohol and other by-products. The gas is caught up in the gluten network, which aerates the dough. The second function of yeast, equally vital to producing quality bread, is to assist the ripening or mellowing of the gluten in the dough, so that when the item is baked, the gluten is in a condition, which gives evenly to the expanding gases and at the same time retains them (gases). For fermentation to occur, yeast needs a source of glucose (a simple sugar). Small amounts of glucose and fructose in the dough are fermented directly by the yeast. Other sugars and carbohydrates are converted to glucose by enzymes in the flour. Yeast must be in a good condition to work efficiently. It should be cool to the touch and a creamy color. If it is dark , soft sticky consistency, with an unpleasant odor, then it should not be used. Small quantities can be kept pressed into a small bar and stored in a cool place. Yeast works best between 25C and 28C. Above this, the fermentation is rapid but gets progressively weaker as the temperature increases until 55C to 60C, when yeast is killed. Between 23C and 25C, yeast works slowly, till at 25C, fermentation stops. It should never be mixed with dry salt or sugar or dispensed in a strong solution of either, which will kill the yeast. As a living organism, it can never be dissolved in liquid.

**SALT** – Salt is a crystalline solid, white, pale pink or light grey in color, normally obtained from sea water or rock deposits. Salt is an essential ingredient for both sweet and savoury dishes. Salt helps to bring out the flavour of other ingredients. If too much is added, food becomes inedible and too little makes food insipid. The right amount to be added is known by experience. It adds to the nutritive value of food by providing the essential mineral, sodium chloride. Salt has physical effects on the gluten of flour. In reasonable quality it strengthens gluten and increases its resistance to the softening effects of fermentation. Too much salt on the other hand will remove the power of gluten to hold gas. Salt also acts as a preservative; it speeds up coagulation of eggs and lowers the freezing point.

Salt is available in three forms:

1. Table salt (fine) containing phosphate

2. Coarse or freezing salt for culinary purposes

3. Celery salt (used as an alternative to fresh celery or celery seed).

**Uses of Salt**

1) Salt is essential for good health.

2) Salt is used as a preservative and as a seasoning. Salting is one of the oldest popular methods of preserving ham, bacon, fish, etc.

3) Use of the correct amount of salt improves the flavour of the savory dished and when a little is added to sweet dished, it enhances the flavour.

4) It has a physical effect on the gluten of flour and strengthens gluten and increases its resistance to the softening effects of fermentation.

5) Cauliflower, when put in salted water, makes the insects come out.

6) It has a controlling effect on the activity of yeast in bakery products. It controls fermentation and hence it has marked effect on crumb, crust and colour of baked products.

7) Salt added to water, for cooking green vegetables, helps in colour retention and enhances the taste.

**Liquids:-** Liquids are an important ingredient in bread making. The type of liquid used and the temperature it is used at will have a great impact on the overall quality of your yeast-leavened bread.

Liquid hydrates and dissolves the yeast granules.

Liquid blends and binds ingredients together.

Liquid mixes with flour to form gluten.

**Types of Liquids**

Water and milk are the most commonly used liquids in breads.

 **Water**

Water is recommended for rehydrating, or dissolving yeast. You can use water directly from your tap. It is best to use water of medium hardness (50-100ppm) for bread making. Too hard or too soft water, as well as water high in fluoride or chlorine, will result in short, stubby loaves. If you suspect you have a water problem, try substituting bottled or distilled water. Breads made with water as the only liquid will have a more open texture, a more wheaty flavor and a crisper crust.

**Milk**

Milk creates breads which are richer and have a more velvety texture.

Milk makes a softer crust that will brown more quickly due to the sugar and butterfat in milk. Milk also improves the keeping quality of breads and contributes nutrients. It used to be that scalding milk was necessary to kill bacteria that might affect the yeast activity and to alter a protein in the milk that played havoc with the gluten structure in bread. However, pasteurization has protected us from harmful bacteria and has altered the proteins, so scalding milk is no longer necessary. If you are lactose intolerant you can substitute soymilk, or other milk substitutes, but there will be a flavor and texture difference in your product. Buttermilk, yogurt, cottage cheese and sour cream are also used as part of the liquids in some bread.

**Sweeteners**

Sugars vary in their sweetening quality and are available in the following form-granulated sugar, castor sugar (finer than granulated and used for baking), icing sugar, preserving sugar (coarser than granulated and used for jams and jellies), and brown sugar (for colour and flavour), lactose (milk sugar) cane syrup, maple syrup, treacle, honey and golden syrup. Substitution of one sugar (castor, icing) for another in a baking formula, gives allowance for the difference in the sweetening effect.

The most obvious difference between types of sugars used in the home is colour. When sugar has been extracted from the juice of the beet or cane plant, a strong tasting black syrup (known as molasses) remains. When white sugar is made, the molasses are entirely removed, whereas brown sugars retain varying amounts of this natural syrup. The more molasses in brown sugar, the stickier the crystals, the darker the colour and the stronger the flavour. However, the presence of molasses does not change sugar's nutritional value.

**Shortening**

### ****What is shortening****

An edible fat that is solid in nature at room temperature. The name for the fat, “shortening,” is deemed appropriate because of the act of shortening gluten strands in wheat by fat addition. Since shortening is 100% fat, as opposed to the 80% fat content of butter, shortening aids in producing a very tender baked good.

### ****Function****

Shortening serves four basic functions.

1. The first function is to shorten baked goods like pastries, pie crusts, and breads to create the aforementioned tender and flaky final product. Accomplished by preventing the cohesion of wheat gluten strands during mixing, this action physically shortens the strands of gluten resulting in a less elastic and sticky protein.

2. The second function is frying. Since shortening is hydrogenated to lower iodine value and has a low percentage of unsaturated fatty acids, shortening shows higher resistance to oxidation and rancidification than alternative typical vegetable oils that may be used to fry.

3. And third, shortening serves to add flavour as well as richness to typical breads concurrent with extending the shelf life when compared to products excluding a shortening component.

4. The fourth and final function is the power to cream. For example, creaming occurs when making icings or fillings when blending sugar and shortening together incorporating large volumes of air bubbles and thus creating the desired fine, delicate structure in the end product.
In baking, shortening is sometimes referred to as a tenderizer. In cake making, shortening is used to tenderize the product by incorporating air in the finished cake batter as well as lubricating the other ingredients allowing the cake to rise more freely and increase the shelf life of the product.

**Egg**

The incorporation of eggs in a bread dough results in many improvements. Egg adds to the increased volume, better texture and better oven spring. It is economical to use as it contributes immensely to improved quality and volume of the product

**Pastry dough**

**Pastry** is dough of flour, water and shortening that may be savoury or sweetened. Sweetened pastries are often described as *bakers' confectionery*. The word "pastries" suggests many kinds of baked products made from ingredients such as flour, sugar, milk, butter, shortening, baking powder, and eggs. Small tarts and other sweet baked products are called **pastries**. The French word patisserie is also used in English (with or without the accent) for the same foods. Common pastry dishes include pies, tarts, quiches and pasties.

Pastry can also refer to the **pastry dough** from which such baked products are made. Pastry dough is rolled out thinly and used as a base for baked products.

**Wheat dough**

Wheat dough is prepared fromWheat flour mixing with water, milk and ingredients like egg, salt margarine or butter depend up on the use of the dough and it’s the most important ingredient in home baking and is the framework for almost every commercially baked product and pasta. Of the grains available for the production of flour, wheat is unique. It is the only cereal grain with sufficient gluten content to make a typical loaf of bread without being mixed with other grains. For example, for one to make rye bread a certain amount of wheat flour is usually present in the end product. Breads can be made without wheat flour but they are rather rare because the bread will not rise as high and therefore will be very dense.

 **Pie pastry dough**

Pastry dough and fat are laminated together to produce many thin layers of pastry. During baking, water is driven off from gluten in the paste as steam and trapped in the fat layers, blowing the paste layers apart. These inflated layers are set by heat of oven to create a light, puffy, fl aky and tender pastry.

**Flour :** Low protein soft fl our makes the most tender pastry. As the amount and strength of protein present in the fl our increases so too does the toughness. Soft fl our has less starch damage, so it absorbs less water which is an advantage when water has to be baked off.

**Fat:** Needs to be soft to mix with and coat the fl our particles at processing temperatures. It should not be oily and a bland taste is preferred. Margarine is frequently used with allowances made for its water content.

**Sugar:** Helps to shorten the pastry. It also adds colour and extends the shelf life. Castor sugar is preferred due to its ability to readily dissolve in the small amounts of liquids used in pastry manufacture. High sugar pastry will have a fi rmer, crisper texture with dark surface, but too much sugar produces a sticky and diffi cult to machine pastry. Glucose or lactose can be used; they are both sweeter than sucrose and offer more browning.

**Salt:** Added at 1.5–2%\*, although addition levels are adjusted based on the salt content of margarine

**Baking powder**: To increase shortness or tenderness of lower fat pastry. The leavening effect of baking powder produces a more open structure pastry

**Puff pastry dough:**

Puff pastry has equal amounts of fat and flour. A dough is made with flour, salt, and the lemon juice. After allowing it to rest, the dough is rolled out into a square and the creamed block of fat is placed in the centre. The dough is then folded around the fat and it is refrigerated for a while. The dough is then rolled into a rectangle about ½ “thick. Fold the two ends to the centre and then into half (book fold). Make sure that the edges /corners are even. Refrigerate/rest the dough to on°relax the gluten. Do not refrigerate for too long as the fat will harden. Now turn the dough 90 the table so that the length now becomes the breadth. This step must be repeated before subsequent rollings so that it helps to stretch the gluten in all directions, not just lengthwise. Failure to do this will result in the product that shrinks unevenly when they are baked. Repeat the rolling and folding a total of four times. The dough is now ready to be rolled out for the final shaping and cutting.

**Cookies dough**

Cookies are made with soft dough that has a comparatively high percentage of liquid. The other varieties call for stiff dough, usually less sweet and often higher in fart content than soft dough.

**MIXING METHODS**

Cookie mixing methods are similar to cake mixing methods. Major difference is that less liquid is incorporated, therefore less gluten. The methods of mixing are: a. One stage b. Creaming c. Sponge One Stage method: All the ingredients are mixed at once. Here the baker has less control over the mixing. Creaming method: This is identical to the creaming method for cakes. The amount of creaming affects the texture of the cookies, the leavening and the spread, hence only a small amount of creaming is desirable. Sponge method: This is similar to the egg foam method for cakes. The only batter is delicate. Precaution that one has to take is to keep the batches small because the

**MAKE UP METHODS**

Because their mixing is simple, it is better to classify cookies and biscuits according to their makeup. Bagged: Also, called pressed cookies are made from soft dough. The dough must be soft enough to be forced through a pastry (piping) bag, but stiff enough to hold its shape. E.g.: Butter Buttons

**Dropped:** these cookies are made from soft dough. In this method, the batter is deposited on a sheet for baking with a spoon or a scoop. When the dough contains pieces of nuts, dried fruits or chocolate bits or chips, this method is used. Also, when you want the cookie to have a rough homemade look. E.g.: peanut macaroons.

**Rolled:** Cookies are rolled and then cut with cutters. Bakeshops and 5 star operations do not make these types of cookies because of the labour involved. Also, after cutting the scraps, these are re rolled, making tough and inferior cookies. The only advantage is that you can make different shapes and sizes. E.g.: Tricolor biscuits

**Moulded :** In this method, each piece of dough is moulded into the desired shape. This usually involves flattening the piece out with a weight. (stamp the design) e.g.: Shrewsbury Biscuits (from Kayani, Pune).

**Icebox:** Also called refrigerated cookies. This method is ideal for operations that wish to have freshly baked cookies on hand at all times. Rolls of dough are made in advance and kept in the fridge. They are then cut and baked as needed. This method is also used to make multi colored cookies in various designs. E.g.: chequered and pinwheel.

**Bar**: Here the dough is baked in long narrow strips which are then cut cross wise into bars.

**Sheet:** This make up is like the sheet cakes….only denser and richer. No matter what method is used, one important rule to follow is – the cookie should have a uniform size and thickness. This is essential for even baking. If the cookies are to be garnished, they must be done immediately on panning. Press them gently when still fresh. If you wait, the surface dries up

**Cakes & icing**

**What is a CAKE FORMULA?**

It is an accurate record of the quantities of the raw materials necessary to make a particular type of cake. In other words………..it is an accurate recipe. If the recipe is correct, it will produce a good cake. As important as the recipe is the correct temperature, time and packing of the product. A good cake is one showing no faults, either in appearance, texture or while eating. It should be of good flavor and aroma and if it contains fruits, they must be evenly distributed. Bakery being the science that it is, we refer to the recipe as a formula. In the bakery, the range of ingredients that are used and which are essential is limited. There is Flour, Fat, Sweetening and Moistening. Each of these has a specific role to play and must be in Balance with each other.

**What is BALANCE?** The ingredients that are used in cake making are divided according to their functions:

**The Tougheners** – these are the ingredients that provide structure and form and give shape to the product. These will include flour and egg. The starch in the flour gelatinizes and the protein in the egg coagulates during baking and gives shape to the cake.

**The Softeners** – these are the ingredients that soften the texture of the cake and include sugar and fat and milk. This softens the texture of cake and makes it different from that of bread, which contains basically the same ingredients but in a different proportion.

**The Moisteners** – these ingredients like milk, egg and liquid sweeteners like golden syrup provide the moistening effect in the batter and adjust the consistency.

**The Driers** – are those ingredients, which absorb the excess moisture in the batter and include flour, milk powder, cocoa powder. The problem in Balancing is that certain ingredients perform more than one function. Eggs provide toughening but are also a moistening agent. Milk is a moistening agent, but milk powder is a drier!!!! The aim of formula balancing is to balance the moisteners with the driers and the tougheners with the softeners. A simple sponge recipe may be in perfect balance, but when converted into a chocolate cake, the addition of cocoa powder in the recipe will mean additional driers so the corresponding moistening (addition of milk) will have to be increased as well. There are three simple rules that govern Formula

**Balancing:** - the weight of the fat should not exceed the egg - the weight of the fat should not exceed the sugar - the weight of the sugar should not exceed the total liquid The Effect of Sugar Sugasweetens. It also has the power to lift and lighten the cake and to give the crust its color. It improves the taste and the flavour of the cake as well as the keeping quality and it adds to its nutritive value. The extra sugar in a recioe will result in the M Fault, when the extra sugar has lifted the batter to such an extent that the protein-starch structure can no longer hold up the cake and collapses. Excess sugar will result in spots on the crust and the crumb will be sticky (excess moisture). On the other hand, if the batter is made with less sugar, it will have a decreased volume with a peaked surface. The crumb will be dry and harsh. The peaked top is the result of the lack of softening action of the sugar on the gluten, which in turn will have greater resistance to expansion resulting in a peaked top.

**The Effect of Fat**: Fat imparts a rich and pleasant eating quality to the cake and increases the food value. Butter adds flavor and improves the quality of the cake. Because of its shortening property, fat/butter also prevents toughness. It holds the air that is incorporated in the initial process of creaming. To much fat in a recipe will result in a cake of poor vol; Ume. The top crust will be thick and greasy. An increase in fat must be balanced by an increase in the toughners (structural material) like flour and egg. Less fat will make the caske tough, the volume will be poor and the crumb structure will show tunnel like holes pointing to the centre of the crown of the cake. The Effect of Baking Powder Baking Powder is used for aeration, thus increasing the volume of the cake. Some recipes do not use baking powder and the aeration is provided by mechanical means like creaming or beating (of eggs) or by sieving. Excess baking powder will produce the same effect as an excess of sugar will produce. The only difference is that there is a generation of gas beyond that which the flour and egg can take, with the result, the cake collapses. The crust of the cake is darker than normal and the crumb is open and is discolored especially near the base of the cake. Less baking powder will produce a cake of poor volume.

**Problems/Faults in Cakes**

1. Cakes rise and fall during baking: An unbalanced formula is commonly responsible for this condition. Too much liquid or sugar will weaken the structure. Less flour or weak flour will not produce the structure required to support the leavening action. An excess of baking powder will produce excess gas that will weaken the structure and cause collapse. Too much aeration caused by over beating will also stretch the cell structure causing it to weaken. Excess fat may overburden the flour and egg structure causing the cake to rise initially and then collapse. Also, if during baking, the cake in the oven is shifted about before the it is fully set, it will tend to fall back.

 2. Cakes sink after baking: Cakes that are rich in sugar and fat but not supported by sufficient flour and egg will tend to sink after baking. Excess moisture in the in the cake may cause shrinkage. Too rapid cooling of freshly baked cakes can also cause shrinkage.

3. Cakes have Peaks: Peaks are often caused by too strong flour. A high gluten content will use the batter to become stringy and binding. Lack of liquid results in a firmer batter that does not expand evenly and peaks are formed from the forced breakthrough of the expanding gas and steam.

4. Fruits sink to the Bottom of the Cake: A moderately strong flour must be used to make fruit cakes. There should be sufficient amount of gluten developed to hold the fruits in suspension. Some amount of extra gluten can be developed by mixing the batter well, after the addition of the flour. This will provide a structure that is strong enough to hold the fruits and the nuts. Weak flour will allow the fruits to sink to the bottom as the fat melts and liquifies and sugars are in a syrup form. Also, large pieces of fruits will settle as they are too large to be supported. Fruits, which come in sugar syrup, must be drained properly. Excess liquid will act like a lubricant and allow the fruits to move rapidly through the batter during the baking process.

 5. Cakes crumble when sliced: An open grain and a weak structure are the primary cause for cakes getting crumbly. It may be due to over creaming, excess shortening or sugar or even improper mixing. A weak structure is caused because of a weak flour or lack of the flour – egg combination. An excess of sugar creates a very open grain that will not hold the fruits. Fruits that are not soaked and are dry will absorb the moisture and make the cake crumble

Icing

**Icing**, often called **frosting** in the United States, is a sweet, often creamy glaze made of sugar with a liquid, such as water or milk, that is often enriched with ingredients like butter, egg whites, cream cheese, or flavorings. It is used to cover or decorate baked goods, such as cakes or cookies. When it is used between layers of cake, it is called **filling**.

**Types of icing**

## Fondant

This stiff and shiny icing can be kneaded and rolled out to cover fruit or chocolate mud cakes, often over a layer of marzipan. Since its firmness helps keep cakes fresh, it is often used for big cakes, wedding cakes and cakes that require traveling.

Mostly It comes in a ready-to-use block, It comes in white and ivory shades, but can be tinted to any colour.

**Covering cake with fondant**

Brush the cake lightly and evenly with jam. Roll fondant to desired thickness, then lift onto cake using a rolling pin. Smooth the surface with hands dusted with icing sugar, ease paste or fondant around side and base of cake. Trim excess fondant with a sharp knife.

## Meringue

This typically American-style frosting is made from egg whites, caster sugar and water. It is whipped and then spread with a palette knife onto the cake to create an edible looking icing that looks particularly striking when decorated with fresh flowers. Be warned though, you must act quickly when icing your cake as it sets within moments of coming off the heat.

**American-style meringue frosting**
2 egg whites
425 g caster sugar
100 mL water

Using a hand-held electric beater, whisk egg whites in the bowl over a saucepan of simmering water until very stiff. In a separate pan, dissolve the sugar in the water and boil for 5-10 minutes until the liquid is thick and syrupy and has reached the 'thread' stage - when the last few drops that fall from a metal spoon come off in one long syrupy thread.

Pour the syrup over the egg whites, whisking all the time. Return the bowl to above the saucepan of simmering water and continue to whisk for 10-15 minutes or until the icing is white, very thick and meringue-like.

## Ganache

## This rich chocolate icing is made from either white of dark chocolate and cream. Ganache can look shiny or matte and is also used as a filling or piped into decorations. White chocolate ganache can be tinted. Avoid pairing ganache with a light cake such as a delicate sponge as this thick icing needs a cake that it won't overpower, such as a mud cake or an almond bundt cake

**Ganache**
300 mL cream
600 g chocolate

Boil cream, then remove from the heat. Add the chopped chocolate and mix until the ganache is smooth. Allow the icing to cool completely before using, and if it's too hard gently heat in the microwave to return to a spreadable consistency

## Cream cheese icing

## The combination of cream cheese, butter and icing sugar makes a delicious fluffy, cream-coloured icing. Cream cheese icing traditionally decorates carrot cakes and cupcakes. It can be smoothed to a relatively even finish, or fluffed up for a more casual cake

## Cream cheese icing

## 30 g butter, softened

## 80 g cream cheese, softened

## 1½ cups (240 g) icing sugar, sifted

## Beat butter and cheese in a small bowl with an electric mixer until light and airy. Gradually beat in sifted icing sugar until the icing is fluffy

## Royal icing

## Often confused with fondant, royal icing is a white meringue-like mixture made from egg whites, acetic acid and icing sugar. Royal icing is easily made at home, and has multiple uses. Becoming rock-hard once set, it is ideal for attaching decorations to cakes and is a popular icing for piping.

**Royal icing**

1½ cups pure icing sugar, sifted
1 egg white
4 drops acetic acid

Lightly beat egg white in a small bowl. Add icing sugar one tablespoonful at a time, beating well after each addition. When icing reaches the desired consistency, add acetic acid and beat well.

**Marzipan**

is a confection consisting primarily of sugar or honey and almond meal (ground almonds), sometimes augmented with almond oil or extract. It is often made into sweets; common uses are chocolate-covered marzipan and small marzipan imitations of fruits and vegetables. It is also rolled into thin sheets and glazed for icing cakes, primarily birthday, wedding cakes and Christmas cakes. This use is particularly common in the UK, on large fruitcakes. Marzipan paste may also be used as a baking ingredient, as in stolen or banket. In some countries, it is shaped into small figures of animals as a traditional treat for New Year's Day. Marzipan is also used in Tortell, and in some versions of king cake eaten during the Carnival season.

Basic mixing methods

**Mixing Methods**

***Straight Dough Method***

1. Soften the yeast in warm water
	* For compressed yeast water should be 80-85 degrees F.

For active dry or fast rising yeast the temperature sure be between 110-115 degrees F

2. Add the sugar, fat and salt to the milk

* The milk should be room temperature to lukewarm
* Cold ingredients will slow the rising action when added to the activated yeast.

3.Combine the yeast with the liquid mixture and add some of the flour. Beat the mixture until smooth, then add the remaining flour gradually to form a dough.

* Straight – Dough Method is good for refrigerator dough recipes---but often calls for extra yeast, sugar, and salt.
* When making a refrigerated dough , mix and knead then place in covered bowl in refrigerator to rise. Dough will double in bulk before it becomes chilled
* Shape into bread or rolls and bake it the next day.
Sometimes when refrigerated this method is called COOL-PROOFED OR COOL-RISE METHOD

***Fast Mixing Method***

1.Mix the yeast with some of the flour and all of the other dry ingredients

2. Heat the liquid and fat together to a temperature of 120-130 degrees F. and add to dry ingredients

3. Add eggs if required fir recipe and then add the rest of the flour to form a dough

Fast Mixing Method --works well with active dry or fast rising yeast
allows ingredients to blend easily
 eliminates the need to soften the yeast

***Sponge Method***

Mix the liquid, sugar, yeast, and part of the flour together. This mixture is called a *SPONGE*

2. When the *SPONGE* becomes bubbly and light, add the cooled melted fat, the salt, and the rest of the flour to form a dough.

***Batter Method***

Some recipes are prepared by the batter, or “no mix” method. These recipes use less flour and thus the yeast mixture is thinner than a dough. This method is a modification of the straight-dough method that eliminates kneading. Stirring develops the gluten. It is the quickest mixing method.

***GLUTEN***

* Forms the framework of the bread
* Is developed during mixing and kneading
* Holds the carbon dioxide produced during fermentation

***KNEADING***

* KNEADING develops the gluten
* Means to press, fold, and turn the dough, then repeat….

Too much flour added during kneading will make the dough stiff.

Too much pressure at the beginning of kneading will make the dough sticky and hard to handle.

Too much pressure toward the end of kneading can tear or mat the gluten strands that have already developed.

***Fermentation***

After kneading the dough must rest, during this time the yeast and the sugars act together to from alcohol and carbon dioxide….this process is called

**Punching the Dough**

When dough is light, punch it down to release the carbon dioxide, then fold and turn dough to smooth side….sometimes the recipe will call for a second rise at this time……

**Shaping**

* Use a sharp knife for dough cutter to divide into portions
* Allow the dough to rest about 10 minutes to make it easier to handle

Flatten then shape

 --------------------------------------------THE END-------------------------------