



# BAKERY

## CHAPTER 1

## **STD XII**

### **BAKERY SYLLABUS FOR CRM COURSES**

#### **Unit 1**

##### **PASTRY DOUGH AND PRODUCTS (SHORT CRUST DOUGH, SWEET DOUGH, CHOUX PASTE (10 marks)**

Ingredients and their role in pastry making

Making of pastry dough and its products (Short crust dough, Sweet dough, Choux paste)

#### **Unit 2**

##### **PASTRY DOUGH AND PRODUCTS (PUFF & LAMINATED PASTRIES) (10 marks)**

Making of pastry dough and its products (Puff pastry, Strudel pastry, Phyllo pastry)

Laminated pastries and method used (Danish pastries, croissants)

#### **Unit 3**

##### **COOKIES AND BISCUITS (10 marks)**

Ingredients and their role in production of cookies

Types of cookie dough, method used in making (drop cookies, sheet cookies, pressed cookies, meringue cookies)

Examples of cookies made using different methods

Characteristics of a good cookie, fault identification

#### **Unit 4**

##### **CAKES (10 marks)**

Ingredients and their role in production of cakes

Types of cake sponges, mixing methods and techniques (Creaming method, Whisked sponge, Egg separation method, Oil based cake sponge)

Examples of cake sponges made using different methods (Pound cake, Swiss roll, Madeira cake, Chiffon cake)

Characteristics of a good cake sponge, fault identification

Icings and fillings used in cakes (butter icing, royal icing, whipped cream, fondant, gumpaste, marzipan, chocolate(glaze and fudge), praline)

## **UNIT 5**

### **INTERNATIONAL CAKES (5 MARKS)**

Components of international cakes:Black forest, Dutch truffle, Cream cakes, Cheesecake, Chocolate mud cake, Opera cake, Pineapple upside down, Pavlova,Napoleon gateau, Yule log, Brownies, Christmas fruit cake, Plum pudding,Charlotte russe, Tiramisu.

### **COLD & FROZEN DESSERTS (5 marks)**

Types of Cold Desserts: Bavarians, Chiffons, Mousses and Soufflés.

Types of Frozen Desserts

Sherbet – Types

Ice Creams - Types

## UNIT 1

### Pastry dough and products (Short crust dough, Sweet dough, Choux paste)

- Ingredients and their role in pastry making
- Making of pastry dough and its products (Short crust dough, Sweet dough, Choux paste)

The very nature of most pastries is to be light, airy, flaky, and buttery. All pastry starts out as a combination of ingredients, such as flour, water, salt, butter or other fats, and is made by using different ingredients, mixing and baking techniques.

In puff pastry, a certain amount of gluten formation is essential, but all of the gluten strands must lie in one plane to give strength to the horizontal sheets. Here, the folding and rolling technique is used.

#### INGREDIENTS AND THEIR ROLE IN PASTRY MAKING

**FLOUR:** Wheat flour is essential to pastry-making because it is the only flour with the gluten that allows dough to stretch and expand in the oven. Different types of wheat flours are suited to different types of pastry. Pastry flour, which is milled from soft wheat, is best for rich short crust and refrigerator dough's. Regular short crust and choux pastry require allpurpose flour, a mixture of hard and soft wheats, with a gluten content high enough to make dough's resilient but still tender. To produce tender puff pastry, a mixture of all-purpose flour and low-gluten cake flour is recommended. Dough's for strudel and phyllo should be made from strong, high-gluten bread flour that can stand up to stretching into large thin sheets.

**EGGS** are another basic ingredient in many baked products. They provide structure, aeration, flavour and moisture. They also tenderise cakes and add colour and nutritive value.

**FATS AND OILS :** Fat, in the form of butter, margarine, solid vegetable shortening, lard, or vegetable oil, plays several important roles in pastry-making. In addition to adding flavor, the fat coats and separates flour particles, helping to lubricate and tenderize the pastry. Because fat is not absorbed by the other ingredients, it acts as a spacer, contributing flakiness to the pastry. The method of incorporating the fat into the dough affects the final texture, and differs with the various pastry types. Whether the fat is creamed, cut in, rolled in, or melted, it should be evenly distributed throughout the mixture. They also provide some nutritive value. It is important to add the correct amount of fat as too much fat will make the baked product greasy and unpleasant to eat, while too little fat will leave you with a product that lacks flavour and stales quickly.

**LIQUIDS:** Water and milk are the most commonly used liquids in pastry but orange and lemon juice, cream, egg, and other additions can contribute to the flavor and texture of the pastry. The liquid starts the development of gluten in the flour. During baking, the liquid turns to steam, helping to leaven the pastry. The amount of liquid used will affect the tenderness of the dough, as does the fat and type of flour.

**Milk** is used in baked products to improve texture and mouthfeel. The protein in milk also gives a soft crumb structure in cakes, and contributes to the moisture, colour and flavour of a baked product. Cakes that contain milk also tend to have a longer shelf life.

**SALT** is usually only added in very small amounts to baked products, but it has a noticeable effect on the flavour of baked products. It not only provides its own flavour but brings out the natural flavour of other ingredients. In bread doughs, salt strengthens gluten and improves the consistency of the dough. Carbon dioxide given off by the yeast is more easily trapped by the strengthened gluten, which makes a better loaf of bread. Salt is also a good preservative as it absorbs water so there is less free water for bacterial and fungal growth.

**SUGAR** gives cakes and other baked products sweetness and is used in many forms and many ways. In yeast raised products, sugar acts as food for the yeast. In cakes, sugar assists with the aeration and stabilising of batters. Sugars improve the crust colour of baked products, improve flavour and help to retain moisture, keeping products softer for longer and so reducing staling. Examples of sugar forms are granulated sugar, castor sugar and icing sugar. Sugar also comes in liquid forms such as syrup, treacle, corn syrup, honey and caramel.

**YEAST** belongs to the fungi family. It ferments carbohydrates (sugars) to produce carbon dioxide gases and alcohol, which aerate bread and other yeasted products, giving it volume and texture. These by-products of yeast also contribute to the colour and aroma of bread and other yeasted products.

**LEAVENERS:** Steam acts as the raising agent in puff and flaky pastries. In choux pastry the raising agents are eggs plus steam. Baking powder and baking soda can be used to leaven. The yeast in Croissants and Danish depend upon the thin layers of butter to "help" the yeast; the fat particles produce steam from the water in the butter (butter is 81 % fat and 19 % water) when baked, and that from yeast, gives them their light and flaky texture.

**ACIDIC INGREDIENTS:** Cider Vinegar/Lemon Juice as well as buttermilk, sour cream or other acidic ingredient can be found in pie crust recipes. They tenderize the flour's gluten, formed in the dough when wheat flour is moistened and stirred, as well as when rolling and handling the dough. Gluten is a toughener and acidic ingredients weaken the gluten that forms, making the crust tender and less likely to shrink. (Keeping well chilled ingredients and dough also helps with preventing shrinkage).

**There are 5 types of pastries.**

1. Short Crust Pastry.
2. Choux Pastry.
3. Puff Pastry.
4. Flaky Pastry.
5. Laminated Pastry

### ***SHORT CRUST PASTRY***

Short crust pastry is a mixture of flour, fat, sugar and sometimes egg and milk. The flour should have low gluten content, one that is milled from soft wheat flour. The fat will reduce the extensibility of the gluten that is it makes the gluten strands shorter....hence the term ***shortening*** for the fat used in the bakery and the term ***short crust pastry***.

The usual method of making short crust pastry is by the rub-in method. Chilled fat or butter is rubbed into the sieved flour so that it is finely dispersed and resembles a sandy or bread crumb like texture. The fat forms a thin layer or coating on the glutenin and gliadin molecules, without turning the fat into a continuous paste. Cold water is sprinkled over the mixture to form smooth dough. The ratio of fat to flour is normally 1:2, but the fat can be increased to equal the flour to obtain a rich dough. This dough would be very difficult but not impossible, to work with.

Various sweet and savoury products are made with short crust pastry. It forms the base of several pies, tarts, flans and also products like cheese straws and turnovers. Few precautions must be taken when making short crust pastry. It is important not to work the dough too much as it will get tough due to the development of gluten. This can also happen when scrapings and trimmings are added to the dough and re worked. The use of too much flour for dusting will also alter the ratio of the mixture and cause toughening as the extra flour proteins – glutenin and gliadin - does not have a coating of fat around it, and thus come together to form gluten.

### **Some faults in Short Crust Pastry**

- Hard or tough pastry is due to too much liquid or too little fat. It is also probably due to over mixing.
- A soft and crumbly pastry is due to too little water for the binding, too much fat or the use of self raising flour instead of plain flour.

- A shrunken pastry is due to excess stretching during rolling.
- A soggy pastry is the result of the filling in the product being too moist.

### **Uses of Short Crust Dough**

1. Short Crust dough can be used for making tarts, pies and flans
2. It can also be rolled and cut into shapes and used as savoury biscuits,
3. It can be crumpled and used as a topping on pies to give a rustic look
4. Certain meats are encased in short crust prior to baking.

### **SWEET DOUGH PASTRY**

Sweet dough is sweet in taste. It is short and brittle like the short crust dough, but its usage is restricted to sweet products.

The steps in making sweet paste are given below. Usually the first two are used for making short paste, but if pies or flans are to be made then the latter steps are used.

#### **Step 1**

Mix the butter & flour using the following method

**Creaming Method:** The butter & sugar should be creamed well. It is made light by incorporation of air. Then add eggs one by one until all the eggs are added. Use a flat paddle to beat the mix. Now fold in the sifted flour to obtain a sweet dough.

**Rubbing Method:** The cut pieces of butter are rubbed into the flour to produce coarse breadcrumbs size particles. Beaten eggs are lightly mixed to form sweet dough. Chill in the fridge before using

#### **Step 2**

Chill the paste in the fridge. If the paste is put in a plastic bag and flattened out with the tip of the fingers before refrigerating, it will be easy to roll later.

The other steps are similar to short crust pastry

### **Uses of Sweet Dough**

1. Sweet dough is used for making tarts, pies and flans.
2. It is rolled, cut into various shapes and baked as cookies and biscuits
3. It is used as base for certain cakes and pastries
4. Thin cut out sheets of sweet dough can be used as decorations.

### **CHOUX PASTRY**

The French term for this pastry Pate a choux literally means cabbage paste, because the profiteroles and cream puffs made from this pastry resemble little cabbages. These are hollow shells which have a crisp and brittle texture. They are then filled with a variety of fillings both



sweet and savoury – including creamed cheese, fresh cream, crème patissiere, fish, and meat pate. Water, butter and salt are boiled together and then the flour is added in to form a partly gelatinized paste. It is mixed vigorously with a wooden spoon and then cooked once more till the mixture has a shiny appearance and leaves the sides of the pan. Beaten eggs are added gradually to the paste, beating continuously to form a smooth pliable and piping consistency mass. It is then piped into the desired shapes – rosettes, fingers or balls. Choux paste is baked at 200°C so as to achieve maximum rise. The temperature is then reduced to 150C to dry out the shells and to obtain the crisp and brittle texture. During the baking, the products should not be subjected to unnecessary movements, otherwise the structure will collapse. Shells can be stored in airtight containers and used as and when required. Éclairs, Cream Puffs, Duchesses, profiteroles and cream puffs are all choux pastry based items.

### **Uses of Choux Paste**

Choux paste is a versatile dough and can be used in savoury or desserts. Some of the examples are

1. Savoury Items: Used for making items such as fritters, cheese balls, gnocchi, etc
2. Chocolate Eclairs: Piped in tube shaped usually 4 inches long and after baking it is filled with flavoured cream or custard and glazed with melted chocolate.
3. Profiteroles: Round shaped balls of choux paste baked and filled with flavoured cream and glazed with chocolate, caramelized sugar, sifted icing sugar etc

