Chapter 6

COOKIES

- Its name derives from the Dutch word *koekie* which means *little cake,* and arrived in the English language through the Dutch in North America.
- In the U.K. cookies are called sweet biscuits; in Spain they are called galletas; in Germany they are called keks; and in Italy they are called biscotti.
- Every country has its favorite. In the United States and Canada it is chocolate chip, in the U.K. its shortbread, in France its sables and macaroons, and in Italy biscotti
- Cookies are often referred to as small, sweet cake items
- They are very similar to cakes in the type of ingredients used & the methods to mix them
- They differ from cakes in the proportion of ingredients & panning methods
- The primary difference between cakes & cookies is the amount of moisture in the mixture

CHARACTERISTICS AND THEIR CAUSES:

- Cookies come in an infinite variety of shapes and sizes, flavors and textures.
- Characteristics that are desirable in some types are not desirable in others.
- For example we want some cookies to be crisp, and others to be soft. We want some to hold their shape and others to spread during baking.

1. Crispiness

Cookies are crisp if they are very low in moisture. The following factors contribute to crispiness:

1. Low proportion of liquid in the mix. Most crisp cookies are made from stiff dough.

2. High sugar and fat content. A large proportion of these ingredients make it possible to mix workable dough with low moisture content.

3. Baking long enough to evaporate most of the moisture.

4. Small size or thin shape, so that the cookie dries faster during baking.

5. Proper storage. Crisp cookies can become soft if they absorb moisture.

2. Softness

Softness is the opposite of crispiness so it has the opposite causes as follows:

1. High proportion of liquid in the mix.

2. Low sugar and fat.

3. Honey, molasses, or corn syrup included in the formulas. These sugars are hydroscopic which means they readily absorb moisture from the air or from their surroundings

4. Under baking.

5. Large size or thick shape, so that they retain more moisture.

6. Proper storage. Soft cookies can become stale and dry if not tightly covered or wrapped.

3. Chewiness

Moisture is necessary for chewiness but other factors are also important. In other words all chewy cookies are soft but not all soft cookies are chewy.

1. High sugar and liquid content

2. High proportion of eggs

3. Strong flour or gluten developed during mixing.

4. Spread

Spread is desirable in some cookies while others must hold their shape.

- **Sugar:** high sugar content increases spread. Coarse granulated sugar increases spread, while fine sugar or confectioner's sugar reduces spread.
- **Leavening:** high baking soda or baking ammonia content encourages spread.
- **Creaming:** creaming together of fat and sugar contribute to leavening by incorporating air. Creaming a mixture until light increases spread. Blending fat and sugar just to a paste (without creaming in a lot of air) reduces spread.
- **Temperature:** low oven temperature increases spread. High temperature decreases spread because the cookie sets up before it has a chance to spread too much.
- **Liquid:** slack batter - that is one with a high liquid content - spreads more than stiff dough.
- **Flour:** strong flour or activation of gluten decreases spread.
- **Pan grease:** cookie spread more if baked on heavily greased pans.

MIXING METHODS:

There are basic three cookie mixing methods:

1. One - stage
2. Creaming
3. Sponge

1. One - stage method

- Scale ingredients accurately. Have all ingredients at room temperature.

- Place all ingredients in mixer. With the paddle attachment, mix these ingredients at low speed until uniformly blended. Scrape down the sides of the bowl as necessary.

2. Creaming method

- Scale ingredients accurately. Have all ingredients at room temperature
- Place the fat, sugar, salt and spices in the mixing bowl. With paddle attachment, cream these ingredients at a low speed.
- For light cookies cream until the mix is light and fluffy, in order to incorporate more air for leavening. For denser cookies, blend to a smooth paste, but do not cream until light.
- Add eggs, liquid and blend in at low speed.
- Sift in the flour and leavening. Mix until just combined. Do not over mix, or gluten will develop

3. Sponge method

- Scale all ingredients accurately. Have all ingredients at room temperature, or warm the eggs slightly for greater volume
- Whip the eggs (whole, yolks or whites) and the sugar to the proper stage soft peaks for whites, thick and light for whole eggs or yolks.
- Fold in the remaining ingredients as specified in the recipe. Be careful not to over mix or to deflate the eggs.

TYPES AND MAKEUP METHODS

1. Bagged
2. Dropped

3. Rolled
4. Molded
5. Icebox
6. Bar
7. Sheet
8. Stencil

1. BAGGED

- Bagged or pressed cookies are made from soft dough's. The dough must be soft enough to be forced through a pastry bag, but stiff enough to hold its shape.
- Examples: butter tea cookies, chocolate tea cookies, coconut macaroon etc.

2. DROPPED

- Like bagged cookies Dropped cookies are made from soft dough.
- When the dough contains pieces of fruits, nuts or chocolate that would clog the pasty tube.
- Scoop & drop cookies onto the prepared baking sheets & bake
- Examples: Oatmeal raisin cookies, chocolate chip cookies, florentines ect.

3. ROLLED

- Cookies rolled and cut (with cutters) from stiff dough are not made as often in bakeshops and food service operations as they are made in homes because they require excessive labor. Also there are always scraps left over after cutting. When rerolled, these scraps make inferior, tough cookies.

- The advantage of this method is that it allows you to make cookies in a great variety of shapes for different occasions.
- Examples: sugar cookies, chocolate rolled cookies shortbread cookies etc.

4. MOLDED

- Divide the dough into equal portions. Each piece is then molded into the desired shape.. For some traditional cookies, special moulds are used to flatten the dough and at the same time stamp a design into the cookie.
- The pieces may also be shaped by hand into crescents, fingers or other shapes.
- Examples: Peanut butter cookies, cinnamon cookies nut cookies etc.

5. ICEBOX

- The icebox or refrigerator method is ideal for operations that wish to have freshly baked cookies on hand at all times. The rolls of dough must be made in advance and stored. Cookies can easily be cut and baked as needed.

This method is also used to make multicolored cookies in various designs Examples: checkerboard, pinwheel cookies, bulls eye, chocolate, butterscotch

6. BAR

- This procedure is called the Bar method because the dough is baked on long, narrow strips, which are then cut crosswise into bars. It should not be confused with sheet cookies.
- Examples: Raisin spice bar, Biscotti etc.

7. SHEET

- Sheet cookies vary so much that it is nearly impossible to give a single procedure for all of them. Some of them are also like sheet cakes; only denser and richer they may even be iced like sheet cakes. Other consists of two or three layers added and baked in separate stages.
- Examples: Nut squares

8. STENCIL

- The stencil method is a specialized technique used with a particular of soft dough or batter. This batter is often called stencil paste. It is used not only for making this type of cookies but also for making ribbon sponge cake for decorative work
- Examples: Almond tuiles etc.

PANNING, BAKING & COOLING

Preparing the pans

- Use clean pans.
- Lining the sheet with parchment or silicone paper is fast, and it eliminates the necessity of greasing the pans.
- A heavy greased pan increases the spread of the cookie. A greased and floured pan decreases spread.

Baking

- Most cookies are baked at a relatively high temperature for a short time.
- Too low a temperature increases spreading and may produce hard, dry, pale cookie.

- Too high a temperature decreases spreading and may burn the edges or bottoms.
- Even a minute of over baking can burn cookies
- Doneness is indicated by color. The edges and bottoms should just be turning a light golden color.
- With some rich dough, burnt bottom may be a problem. In these cases, double pan the cookie by placing the sheet pan on a second pan of the same size.

Cooling

- For most cookies baked without silicone paper, remove them from the pans while they are still warm, or they may stick.
- If cookies are very soft, do not remove them from the pan until they are cool enough and firm enough to handle. Some cookies are soft when hot, but become crisp when cool.
- Do not cool too rapidly - cookies may crack.
- Cool completely before storing.

COOKIE FAULTS & THEIR CAUSES:

Faults	**Causes**
Too tough	Flour too strong Too much flour Not enough shortening Incorrect amount of sugar Mixed too long / improper mixing

Too crumbly	Improper mixing Too much sugar Too much shortening Too much leavening Not enough eggs
Too hard	Baked too long / baking temperature too low Too much flour Flour too strong Not enough shortening Not enough liquid
Too dry	Not enough liquid Not enough shortening Baked too long / baking temperature too low Too much flour
Too brown	Baking temperature too high Baked too long Too much sugar
Poor flavor	Poor ingredient Flavoring ingredient left out Dirty baking pans Ingredients improperly measured

Surface / crust sugary	Improper mixing Too much sugar
Not enough spread	Baking temperature too high Too much flour / flour too strong Not enough sugar Not enough leavening Not enough liquid Insufficient pan greased
Stick to pan	Pan improperly greased Too much sugar

Improvers:

- Improvers controls spread and increases the stack height, improves crispiness and mouth feel, improves appearance and gloss.
    - Poly Sorbate,
    - Glycerol Mono Oleate and
    - Glycerol Mono Ricinoleate