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Pastry and Bakery



TOPIC 1 (Part 2):

INTRODUCTION TO BAKING

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PASTRY AND BAKERY INGREDIENTS - FLOUR

FLOUR

There are several types of flour:

- Wheat flour
- Bread flour
- Cake flour
- All purpose flour
- Self-rising flour
- Rye flour

Bread flour has the highest amount of protein thus, has high gluten content, so it is used for breads. Bread flour is creamy in color and is rather rough and granular.

Cake flour sometimes called soft flour as it is milled from soft white wheat. It is described as weak because the products made from it are tender with delicate texture.

All-purpose flour is made from a combination of bread and cake flour sources and has medium gluten strength. It is suitable for almost any baking purposes.
Self-rising flour contains baking powder and salt

Rye flour has a distinctive flavour many people like and it contains no gluten.

Wheat flour is the most important ingredient in the bakeshop. In baked products, wheat flour provides:

- STRUCTURE
- THICKENING
- NUTRITIVE VALUE

IMPORTANT NOTES:

- Flour should be stored in a high ventilated room free from insects and rodents!
- Flour should be kept away from products with strong aromas such as spices and onions!
- Flour should be kept in a dry tin or glass container in a cool dry place!

PASTRY AND BAKERY INGREDIENTS - SUGAR



Market form of sugar are: granulated sugar, powdered or confectioner's sugar, dehydrated fondant, brown sugar, Demerara sugar, non-nutritive sweeteners and sugar syrup.

Granulated sugars include:

- Regular granulated sugar.
- Very fine sugars called caster sugar.
- Sanding sugars (coarse sugar used for coating).
- Pearl sugar (also called sugar nibs).
- Icing sugar
- Brown sugar

Syrups consist of one or more types of sugar dissolved in water.

- Simple syrup: dissolved sucrose in water.
- Molasses: concentrated sugarcane syrup.
- Glucose Corn Syrup: manufactured from cornstarch.
- Honey.
- Malt syrup: extracted from barley.

PASTRY AND BAKERY INGREDIENTS - FATS

THE MAJOR FUNCTION OF FATS IN BAKED ITEMS ARE :

1. To tenderize gluten
2. To add moistness and richness
3. To increase keeping quality
4. To add flavor
5. To assist in leavening when used as a creaming agent
6. To add flakiness



Fats can be in solid and liquid form.
Examples of **solid fats** are:

- Shortening, Butter, Margarine, Ghee, Cocoa Butter and Lard

Examples of **liquid fats** are:

- Clarified Butter, Vegetable Oil, Palm Oil, Olive oil



PASTRY AND BAKERY INGREDIENTS - FATS

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Shortening is made from 100% vegetable fat, it is solid at room temperature. Obtained by the hydrogenation of vegetable oil, shortening gives pastries their flakiness, and gives cakes or cookies a lighter feel if creamed with sugar to trap air. Shortening provides breads with stability preventing airflow within the loaf during baking, and gives a desirable smooth mouth feel and flavour.

Butter consists of 80% fat and is made from cream. The remaining 20% is water combined with milk solids. Butter imparts flavour sans a greasy mouth feel to all baked goods due to solubility at body temperature.

Margarine consists of 80% vegetable fat, can be used interchangeably with butter.

Ghee is the class of clarified butter with a subtle yellow colour and rich nutty flavour, used as a substitute for pure butter in many cultures. Vegetable ghee, made from various vegetable oils, is more commonly used than ghee made via butter.

Cocoa Butter is pale yellow in colour, pure, edible vegetable fat extracted from cocoa beans. Used in chocolate chips.

Clarified Butter is butter that has been heated to remove the sediment of milk solids therefore turning a clear colour.

Vegetable oil comes from soybean, canola or corn sources. It is used in some muffin, bread and cake recipes. Pastries utilizing oil rather than solid fat result in a mealy texture rather than flaky. In regard to cake recipes, interchanging oil for solid fat results in a heavier texture unless counteracted via increasing sugar or egg. To substitute oil for butter or margarine, use 7/8-cup oil for 1-cup butter or margarine.

Palm Oil is the main source of trans fat-free shortening; solid in nature at room temperature and made from palm oil.

Olive oil is the kind of fat obtained from grinding whole olives and extracting the juice. Used in focaccia bread and also in any baked good recipe. Can be substituted for vegetable oil.

PASTRY AND BAKERY INGREDIENTS - LIQUIDS

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FUNCTIONS OF EGGS IN BAKING:

1. Structure
2. Emulsifying fats and liquids
3. Leavening
4. Shortening action
5. Moisture
6. Flavor
7. Color
8. Nutritive value

THE FUNCTIONS OF MILK IN BAKED PRODUCTS ARE:



1. The water content in milk enables gluten development
2. Adds texture
3. Adds flavor
4. Provides crust color
5. Provides keeping quality
6. Provides nutritive value

PASTRY AND BAKERY INGREDIENTS - LEAVENING AGENTS

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TYPES OF YEAST

1 FRESH OR COMPRESSED YEAST:

Moist and perishable, and is preferred by professionals. It must be refrigerated as it only lasts 2 weeks

2 ACTIVE DRY YEAST:

A dry, granular form of yeast. It requires rehydration

3 INSTANT DRY YEAST:

Dry granular form of yeast but does not require rehydration. Contains little dead yeast so produces gases much quicker than active dry yeast





PASTRY AND BAKERY INGREDIENTS - OTHER INGREDIENTS

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OTHER INGREDIENTS

Other baking ingredients include gelling agents, fruits and nuts, chocolate and cocoa, salt, spices and flavourings

Gelling Agents

- Gelatin is a water-soluble protein extracted from animal connective tissue.
- Two forms available for bakeshop:
  - Powdered
  - Leaf gelatin, sheet gelatin

Using gelatin in formulas:
Soften gelatin in water or other liquid. It absorbs 5 times its weight in water (blooming). Softened gelatin is added to hot ingredients or is heated with other ingredients until it dissolves. The mixture is chilled until it sets.

Fruits and Nuts

Nuts commonly used in bakeshop:
Almond, Brazil nuts, cashews, hazelnuts, macademia nuts, pecans, pine nuts, pistachios, walnuts

Chocolate and Cocoa

Chocolate and cocoa are derived from cocoa or cacao beans. The beans are fermented, roasted, and ground, yielding chocolate liquor, which contains cocoa butter.

- Cocoa is the dry powder that remains after part of the cocoa butter is removed from the chocolate liquor.
- Dutch process cocoa is processed with an alkali to make it darker and more easily dissolved in liquids.



PASTRY AND BAKERY INGREDIENTS - OTHER INGREDIENTS

- Unsweetened chocolate is straight chocolate liquor.
- Sweet chocolate is bitter chocolate with the addition of sugar and cocoa butter.
- Milk chocolate is sweet chocolate to which milk solids have been added.
- Dark Chocolate.
- White chocolate is made of cocoa butter, sugar, and milk solids. Technically, it should not be called chocolate because it does not contain cocoa solids.

Cocoa contains starch, which absorbs moisture (drier) in a batter. When adding cocoa to a formula, use the rule of thumb:

Reduce the flour by 3/8 (37.5%) of the weight of cocoa add

Salt, Spices, and Flavorings

Salt:

- Strengthens gluten structure and makes it more stretchable.
- Inhibits yeast growth

Spices are plant or vegetable substances used to flavor foods. The most important spices and seeds in the bakeshop are: Allspice, Anise, Caraway, Cardamom, Cinnamon, Clove, Ginger, Mace, Nutmeg, Poppy seed, Sesame seeds, Zest of lemon and orange



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Vanilla is the most important flavoring in the pastry shop:

- Vanilla beans
- Vanilla extract

Extracts are flavorful oils and other substances dissolved in alcohol.

Emulsions are flavorful oils mixed with water with the aid of emulsifiers such as vegetable gums.

Alcohols

- Alcoholic beverages are useful flavoring ingredients in the pastry shop.
- Sweet alcohols and liqueurs (e.g., cassis, orange).
- Non-sweet alcohols (e.g., rum, cognac)
- Wines (e.g., Marsala, Madeira).

CONCLUSION

- Principles of measurement and baker's formulas and recipes
- Importance of taking accurate measurements and performing careful procedures
- Able to use math in the bakeshop
- Principles of food safety and sanitation
- Familiar with the material on personal hygiene and safe food-handling procedures



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Thank You



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