CONFECTIONERY

Confectionery also called sweets or candy is sweet food product. Confectionery is divided into two broad and somewhat overlapping categories, **Bakers' Confections** and **Sugar Confections**.

Confections are low in micronutrients and protein but high in calories. They may be fat-free foods, although some confections, especially fried doughs, are high-fat foods. Many confections are considered empty calories.

Bakers' Confectionery

Bakers' confectionery also called flour confections includes principally sweet pastries, cakes, and similar baked goods. In the Middle East and Asia, flour-based confections are more dominant.

Picture showing varieties of bakers confectioneries

Bakers' confectionery includes sweet baked goods, especially those that are served for the **dessert course**. Bakers' confections are sweet foods that feature flour as a main ingredient and are baked. Major categories include **cakes, sweet pastries, doughnuts, scones**, and **cookie.**

Sugar Confectioneries

Picture showing varieties of sugar confectioneries

Sugar confectionery includes sweets, candied nuts, chocolates, chewing gum, sweetmeats, pastillage, and other confections that are made primarily of sugar. In some cases, chocolate confections (confections made of chocolate) are treated as a separate category, as are sugar-free versions of sugar confections. The words candy (US and Canada), sweets (UK and Ireland), and lollies (Australia and New Zealand) are common words for the most common varieties of sugar confectionery.

Sugar confections include sweet, sugar-based foods, which are usually eaten as snack food. This includes sugar candies, chocolates, candied fruits and nuts, chewing gum, and sometimes ice cream.

Confections are defined by the presence of sweeteners. These are usually sugars, but it is possible to buy sugar-free sweets, such as sugar-free peppermints. The most common sweetener for home cooking is table sugar, which is chemically a disaccharide called sucrose. Hydrolysis of sucrose gives a mixture called invert sugar, which is sweeter and is also a common commercial ingredient. Commercial confectionery is sweetened by a variety of syrups obtained by hydrolysis of starch. These sweeteners include all types of corn syrup

Specially formulated chocolate has been manufactured in the past for military use as a high-density food energy source.

Types of Bakers Confectionaries:

- **Cakes:** is a form of sweet dessert that is typically baked. Typical cake ingredients are flour, sugar, eggs, butter or oil, a liquid, and leavening agents, such as baking soda and/or baking powder. Common additional ingredients and flavourings include dried, candied or fresh fruit, nuts, cocoa, and extracts such as vanilla, with numerous substitutions for the primary ingredients. Cakes can also be filled with fruit preserves or dessert sauces (like pastry cream), iced with buttercream or other icings, and decorated with marzipan, piped borders, or candied fruit.

- **Sweet Pastries**

Pastry is dough of flour and 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

- Doughnuts: is a type of fried dough confectionery or dessert food. Doughnuts are usually deep-fried from a flour dough, and typically either ring-shaped or without a hole, and often filled. Other types of batters can also be used, and various toppings and flavorings are used for different types, such as sugar, chocolate, or maple glazing.

- **Scones:** scone is a single-serving cake or quick bread. They are usually made of wheat, barley or oatmeal, with baking powder as a leavening agent, and are baked on sheet pans. They are often lightly sweetened and are occasionally glazed with egg wash.The scone is a basic component of the cream tea or Devonshire tea. It differs from a teacake and other sweet buns, which are made with yeast.

- **Cookies:** Are small, flat, sweet, baked good, usually containing flour, eggs, sugar, and either butter, cooking oil or another oil or fat. It may include other ingredients such as raisins, oats, chocolate chips or nuts**.**

Types of Sugar Confectionaries

Sugar confectionery items include sweets, lollipops, candy bars, chocolate, cotton candy, and other sweet items of snack food. Some of the categories and types of sugar confectionery include the following:

- **Caramels**: Derived from a mixture of sucrose, glucose syrup, and milk products. The mixture does not crystallize, thus remains tacky.

- **Chocolates**: Bite-sized confectioneries generally made with chocolate.

- **Divinity**: A nougat-like confectionery based on egg whites with chopped nuts.

- **Dodol**: A toffee-like food delicacy popular in Indonesia, Malaysia, and the Philippines

- **Dragée**: Sugar-coated almonds and other types of sugar panned candy.

- **Fondant**: Prepared from a warm mixture of glucose syrup and sucrose, this is partially crystallized. The fineness of the crystallites results in a creamy texture.

- **Fudge**: Made by boiling milk and sugar to the soft-ball stage. In the US, it tends to be chocolate-flavored.

- Halvah: Confectionery based on tahini, a paste made from ground sesame seeds.

- **Hard candy**: Based on sugars cooked to the hard-crack stage. Examples include suckers (known as boiled sweets in British English), lollipops, jawbreakers (or gobstoppers), lemon drops, peppermint drops and disks, candy canes, rock candy, etc. Also included are types often mixed with nuts such as brittle. Others contain flavorings including coffee such as Kopiko.

- **Ice cream**: Frozen, flavoured cream, often containing small pieces of chocolate, fruits and/or nuts.

- **Jelly candies**: Including those based on sugar and starch, pectin, gum, or gelatin such as Turkish delight (lokum), jelly beans, gumdrops, jujubes, gummies, etc.

- **Liquorice**: Containing extract of the liquorice root. Chewier and more resilient than gum/gelatin candies, but still designed for swallowing. For example, Liquorice allsorts. Has a similar taste to star anise.

- **Marshmallow**: "Peeps" (a trade name), circus peanuts, fluffy puff, Jet-Puffed Marshmallows

- **Marzipan**: An almond-based confection, doughy in consistency, served in several different ways.

- **Mithai**: A generic term for confectionery in India, typically made from dairy products and/or some form of flour. Sugar or molasses are used as sweeteners.

- **Tablet**: A crumbly milk-based soft and hard candy, based on sugars cooked to the soft ball stage. Comes in several forms, such as wafers and heart shapes. Not to be confused with tableting, a method of candy production.

- **Taffy or chews**: A candy that is folded many times above 120 °F (50 °C), incorporating air bubbles thus reducing its density and making it opaque.

Chocolate means the confectionery product characterized by the presence of cocoa bean derivatives: -

(a) Prepared from a minimum of 200 g/kg of cocoa bean derivatives; and

(b) Which contains no more than 50 g/kg of edible oils, other than cocoa butter or dairy fats.

(Source: Australia New Zealand Food Standards Code - Standard 1.1.2 - Supplementary Definitions for Foods)

Principles of Sugar Confectionery Production

Sugar confectionery refers to a large range of food items, commonly known as sweets. Boiled sweets, toffees, marshmallows, and fondant are all examples.

Sweets are a non-essential commodity, but are consumed by people from most income groups. The variety of products is enormous, ranging from cheap, individually-wrapped sweets, to those presented in boxes with sophisticated packaging.

By varying the ingredients used, the temperature of boiling, and the method of shaping, it is possible to make a wide variety of products. In all cases, however, the principle of production remains the same and is outlined below:

- balance the recipe
- prepare the ingredients
- mix together the ingredient
- boil the mixture until the desired temperature has been reached

- Cool
- Shape
- pack.

Sweets containing high concentrations of sugar (sucrose) may crystallize either during manufacture or on storage (commonly referred to as graining). Although this may be desirable for certain products (such as fondant and fudge), in most other cases it is seen as a quality defect.

When a sugar solution is heated, a certain percentage of sucrose breaks down to form 'invert sugar'. This invert sugar inhibits sucrose crystallization and increases the overall concentration of sugars in the mixture. This natural process of inversion, however, makes it difficult to accurately assess the degree of invert sugar that will be produced.

Variations in boiling temperature can make a difference between a sticky, cloudy sweet or a dry, clear sweet. An accurate way of measuring the temperature is to use a sugar thermometer. Other tests can be used to assess the temperature (for example, toffee temperatures can be estimated by removing a sample, cooling it in water, and examining it when cold). The temperatures are known by distinctive names such as 'soft ball', 'hard ball' etc., all of which refer to the consistency of the cold toffee.

Type of sweet	*Temperature range for boiling (Degrees C)*
Fondants	116-121
Fudge	116
Caramels and regular toffee	118-132
Hard toffee (e.g. butterscotch)	146-154
Hard-boiled sweets	149-166

Moisture Content

The water left in the sweet will influence its storage behavior and determine whether the product will dry out, or pick up, moisture.

For sweets which contain more than 4 per cent moisture, it is likely that sucrose will crystallize on storage. The surface of the sweet will absorb water, the sucrose solution will subsequently weaken, and crystallization will occur at the surface - later spreading throughout the sweet.

Added ingredients

The addition of certain ingredients can affect the temperature of boiling. For example, if liquid milk is used in the production of toffees, the moisture content of the mixture

immediately increases, and will therefore require a longer boiling time in order to reach the desired moisture content.

Added ingredients also have an effect on the shelf-life of the sweet. Toffees, caramels, and fudges, which contain milk-solids and fat, have a higher viscosity, which controls crystallization. On the other hand, the use of fats may make the sweet prone to rancidity, and consequently the shelf-life will be shortened.

Types of sweets

Fondants and creams

Fondant is made by boiling a sugar solution with the optional addition of glucose syrup. The mixture is boiled to a temperature in the range of 116-121°C, cooled, and then beaten in order to control the crystallization process and reduce the size of the crystals.

Creams are fondants which have been diluted with a weak sugar solution or water. These products are not very stable due to their high water content, and therefore have a shorter shelf-life than many other sugar confectionery products. Both fondants and creams are commonly used as soft centres for chocolates and other sweets.

Gelatin sweets

These sweets include gums, jellies, pastilles, and marshmallows. They are distinct from other sweets as they have a rather spongy texture which is set by gelatin.

Toffee and caramels

These are made from sugar solutions with the addition of ingredients such as milk-solids and fats. Toffees have a lower moisture content than caramels and consequently have a harder texture. As the product does not need to be clear, it is possible to use unrefined sugar such as jaggery or gur, instead of white granular sugar.

Hard-boiled sweets

These are made from a concentrated solution of sugar which has been heated and then cooled to form a solid mass containing less than 2 per cent moisture. Within this group of products there is a wide scope to create many different colours, flavours and shapes through the use of added flavourings and colourings.

(Source: Food and Agriculture Organization, http://www.fao.org/WAIRdocs/x5434e/x5434e0a.htm)

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