Science Behind Cookies

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# Introduction

 A cookie is one of the widely served baked foods throughout the world. It takes many shapes and depending upon flavor choices, takes on different colors throughout the world. In most Western countries, cookies are part of the morning and evening meals as well. The chief ingredients in cookies include sugar, flour, traditional flavors, and oil. In some parts of the world, there are different myths attached to the flavors of cookies. In different English speaking states, crisp cookies are known as biscuits, whereas, there is no distinction between biscuits or cookies in America and Canada (Walker and Eustace, 2016). However, most dictionaries refer to cookies as a traditional biscuit. The word biscuit dates back to the early eighteenth century when a Scottish tourist to America referred to a plain bun as a biscuit. This is the reason that in many areas of Scotland, a plain bun is often called a biscuit. The type of cookies depends on the baking sheets, which are normally layered and are plain.

 The traditional norm of baking cookies dates back to the eighteenth century. Unlike the popular myths about any relation of cookies with war torn areas, cookies are reported to be baked even during the fifteenth and sixteenth centuries. The only distinction between cookies and various other bakery items appeared in the seventeenth-century ideas of plain cakes. There are some food theorists who believe that cookies are related to some sort of Middle Eastern saucers, but a lot of literature calls it the European nouvelle item (Walker and Eustace 2016). The Scottish National Dictionary relates different cultural aspects to cookies. The evidence the dictionary refers to is the European and American history. The author mentions that there had been a considerable trade of wheat and related items, most probably, these historians could have referred to cookies as well. Depending upon the formation, cookies normally take three forms which are drop shape, bar-shaped, and filled cookies.

# Ingredients in a Chocolate Cookie

The most basic cookies are made with a ratio of three parts flour to two parts of fat with one part of sugar. These ratios are based on weights and not volumes, therefore, cookies are measured in ounces or grams. The traditional bakers use standard scales to measure the ingredients which give them the exact idea about taste with reference to the weight. This weight is followed for a simple cookie with very little flavoring, other than sweet. If one uses good quality butter, it will take the form of a shortbread without much crisp. Some people also add flavor extracts like vanilla, apple, orange, and lemon citrus, or some spices like cinnamon, ginger or cardamom(Silva and Conti-Silva, 2016). In addition to this, adding an egg or two (about 1 egg for 6 ounces of flour) makes a chewier cookie with a bit more substance, as the protein and fat in the egg hold it together.

In many Western states, some bakers use grain flour to make delicate and nutty cookies. They also substitute chocolate crisps and fats for making chocolate cookies. There are different forms of chips which can be mixed with flavors and flour to get the taste one likes. Chopped nuts or dried fruits like raisins, cranberries or cherries are some widely used chips in cookies since the climate in Western states is cold and dry. The experts of cookie baking use powder for an equal amount of flour and make chocolate cookies. For making simpler cookies, most bakers use egg white-based cookies, like almond macaroons, coconut macaroons or Italian cookies, which are basically a combination of almond paste and egg whites as an ingredient (Silva and Conti-Silva, 2016). Macaroons are often mixed with egg-white beans which are used to beat to stiff peaks with sugar, chocolate, slivered almonds, shredded coconut, or any other nut. It shows that baking is all about ratios, and therefore, one needs to keep the ingredients in balance.

Considering the varying nature of cookies and the traditional recipes, different chefs use other additional materials as well, which affects the weight and shape of the cookie. Buttering, flavoring, using chips, and the usage of sweeteners, all depends on the specialty of cookies. For example, in Northern European states, less sweetener is used with different flavors, typically these flavors are also less sweet. In countries of the Middle East, chocolate cookies are most liked, and Arabs avoid using extra flavoring as well. There are fewer nuts and butter in cookies manufactured at an industrial level in these countries. This industrial level manufacturing of cookies has also affected the quantity and quality of cookies throughout the world. Countries which specialize in bakery items avoid manufacturing cookies on such a large scale. For example, in Scandinavian countries, the large manufacturing units of cookies avoid baking a large quantity in a single time since they believe that it might affect the quality of raw products used in baking.

# What Ingredients Work?

 Back in the sixteenth and seventeenth centuries, cookies were manufactured using very definite ingredients like flour, butter, oil or orange flavor, etc. In almost every region, these ingredients were common, except for some regions where the quantity of flour or baking soda was used slightly more. Flour is used to create a dough which is the basic ingredient and can take on different shapes as well. The dough is mixed with sugar and oil to keep it smooth in contact with the surface, before baking. The basic difference in cookie making is related to dough manufacturing (Manley, 1998). Some chefs add further ingredients to the same dough, whereas, some add additional ingredients like chocolate chips, etc. later on. The dough is an important part of cookie manufacturing since it holds the taste of each ingredient well. Any slight negligence at this stage may damage the complete process. To keep the dough soft and slightly crispy, most chefs use butter oil.

 As the cookie manufacturing process is different throughout the world, therefore, in some parts of the world, it is baked in a more traditional manner. Countries that have a warm climate, keep the dough more marinated while adding additional toppings before manufacturing. In such countries, they manufacture cookies in traditional ovens which are made inside the ground. Each ingredient adds a certain taste and shape to the final makeup of the cookie (Manley, 1998). The more modern recipes, being used in different regions, include adding different colored toppings. Some toppings are actual flavors that are added to the sugarless baked dough. These recipes and different baking material being used in manufacturing have created different tastes and outlooks of the cookies throughout the world.

# How Ingredients Affect the End Product

 The end product is based on the baking material used, the time it was baked, the percentage of sugar used, and the flavor of topping. These ingredients affect the end product based on the time for baking (Giri, 2018). The ingredient creates the taste of the end product and develops its outlook. Different ingredients being introduced in cookie manufacturing has changed the taste as well. Similarly, since cookies are manufactured at a large scale in different kinds of metal material, therefore, it affects the end products.

# References

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