

BUTTER (BEURRE)

A solid fat substance made by churning cream in special conditions of temperature. The cream must first be separated from the milk, then it is pasteurized, that is heated to a high enough temperature to destroy enzymes and bacteria, then rapidly cooled before churning begins. '*Churning*' involves rapidly agitating the cream until the fat it contains forms a solid mass that can be gathered, washed and shaped to make butter. The remaining liquid (buttermilk) can be drained off and used separately.

The composition of a butter must be at least 78% milk fat, 20% other milk solids (whey) and not more than 16% water. Countries that produce butter have national schemes of quality control. Butter may also contain salt and lactic acids cultures. If kept cold, butter remains a solid fat, but softens when warmed and melts when heated. Although most butter is made from cows' milk, it can also be made from the milk of goats, sheep, yak and water buffalo.

There are two main types of butter: sweet cream butter and lactic butter. Sweet cream butter is left to age for 12 hours after the initial heating and before churning. To make lactic butter, the cream is heated again after the initial heating, to allow lactic bacteria to develop; this produces diacetyl, a flavouring substance. After ripening, the cream is then churned. Most continental butters are lactic butters, traditionally made in Denmark and Holland.

Butter is available salted, slightly salted or unsalted. Salt was originally added to butter as a preservative, especially if it had to travel a long distance, such as the butter from New Zealand, but salt is now also used as flavouring. Butter is labeled as salted when it contains 1½–2% salt. Most butter-producing countries produce both salted and unsalted butters. Unsalted butter is a paler yellow than salted butter, almost cream-coloured.

Butter is perishable and therefore needs to be stored in the refrigerator, where it will keep for 2–3 weeks. It can also be frozen. Being an animal fat, a high consumption of butter is not nowadays recommended as part of a healthy diet as it is a saturated fat which is thought to contribute to cholesterol levels and therefore to heart disease. It is also very high in calories, but does contain vitamins A and D and calcium. There are many supposedly healthier butter substitutes on the market these days. Some of these are made by mixing animal fat with vegetable fat, while others have quantities of water whipped into them. Some are designed to look and taste like butter, others are nothing like it.

BUTTER IN COOKING

Despite its unhealthy reputation, butter is used for countless tasks in the kitchen. Nothing can replace it for flavour and richness in cakes, pastry, biscuits and sauces. Butter is also used for frying, especially to achieve a browned effect, and soups. It is also used in the form of *beurre mané* to thicken and enrich stews towards the end of cooking.

A knob of butter makes all the difference to a dish of hot vegetables, and some vegetables, such as asparagus and corn on the cob, are served with melted butter. Butter is also added to creamed potatoes, and baked jacket potatoes are served split and topped with a knob of butter. Flavoured butters are also popular and can easily be made by mixing the chosen herb, garlic or other flavouring into softened butter. After chilling, herb butters can be sliced and used to top hot steaks, fish or vegetables. Other flavourings to mix with butter include ground nuts, anchovies, mustard, chives and watercress.

Apart from its many uses in cooking butter is popular for spreading on bread, scones, hot toast, toasted tea-cakes and crumpets.

CLARIFIED BUTTER

The purpose of clarifying butter is to separate the pure butter from the water, salt and other milk solids contained in the butter. Pure butter can be heated to a much higher temperature without burning so is more suitable for frying. Clarified butter is also used in Genoese sponge and other cake mixtures. To clarify butter, simply heat it to boiling, then leave it to stand until the sediment has settled to the bottom of the pan. The pure butter can then be strained off.

CONCENTRATED BUTTER

This is rather like commercially-made clarified butter, with a high percentage of butterfat (about 96%). Like clarified butter, it can be heated to a higher temperature without burning so is very useful for shallow frying. It is also very economical used in baking as less concentrated butter is needed in a recipe than ordinary butter. However, it may be necessary to adapt baking recipes by adding more liquid when using concentrated butter, which contains less liquid than ordinary butter.

MARGARINE

A yellow fat that first became popular as an economical substitutes for butter. Nowadays, however, margarine is used instead of butter in most cases because it is made from vegetable oils, which contain polyunsaturated fat rather than saturated animal fats.

Margarine first came into use in France in the late 19th Century. The original margarines were made from beef fat and skimmed milk; today they are mostly based on vegetable oils, which have undergone a process known as hydrogenation, which hardens them. Unfortunately, the hydrogenation process transforms polyunsaturated fats into saturated fats, so even vegetable based margarines contain a proportion of saturated fats; in general, the harder the margarine at room temperature, the more saturated fat it contains. Most vegetable margarines are still soft enough, however, to be spreadable and many are sold in plastic tubs rather than wrapped in foil.

By law, a margarine must contain 80% fat and no more than 16% water, the same proportions as in butter. Other ingredients may include salt and various preservatives, flavourings and colourings. Margarines must also contain vitamins A and D. The most frequently used vegetable oils are sunflower, soya and corn oil; some margarines are made from a blend of oils.

Margarines can be used in most of the ways in which butter is used, but the taste is never the same. Soft margarines are excellent for making one-stage sponge cakes and can be used in other types of baking as well. They are also suitable for frying and, of course, for spreading on bread, toast, etc. Margarines should be distinguished from low-fat spreads, which are excellent for reducing calories and cholesterol, but which contain high proportions of water and are not suitable for cooking.