

# Chapter 25



# Dairy and Beverages

**M**ilk is one our most versatile foods, not only as a beverage but even more importantly as a cooking and baking ingredient and as a raw material for the production of a wide array of other foods, including cream, butter, and hundreds of kinds of cheese.

This chapter identifies and describes the many dairy products used regularly in the kitchen and gives guidelines for handling, storing, and cooking with them. The last section of the chapter describes the many types of cheese produced in North America and Europe and gives examples of each type.

The chapter concludes with a discussion of coffee and tea beverages, including guidelines for their production.

## After reading this chapter, you should be able to

1. Describe the major milk, cream, and butter products.
2. Explain why milk curdles and why it scorches, and identify the steps to take to prevent curdling and scorching.
3. Whip cream.
4. Describe the most important kinds of cheese used in the kitchen.
5. Store and serve cheese properly.
6. Cook with cheese.
7. Prepare coffee and tea.

# DAIRY PRODUCTS

## Milk and Cream

### Categories and Definitions

When we talk about milk and cream used in food service, we are nearly always talking about milk from cows. Milk from other animals, including goats, sheep, and water buffalo, is used to make some cheeses, but most of the liquid milk we see, except for a small amount of goat milk, is milk from dairy cows.

Milk is used as a beverage and also in cooking. Similarly, other milk products, including cream, butter, and cheese, are eaten as purchased and also used in cooking.

### PASTEURIZATION

Liquid milk, directly as it comes from the cow and before anything is done to it, is called *raw milk*. Because raw milk may contain disease-causing bacteria or other organisms, it is almost always *pasteurized* before being sold or before being processed into other products. Pasteurized milk has been heated to 161°F (72°C) and held at this temperature for 15 seconds to kill disease-causing organisms, and then quickly chilled. By law, all Grade A liquid milk and cream must be pasteurized. (Grades B and C are used in food processing and industrial uses and are rarely seen in food service or in the retail market.)

Even after pasteurizing, milk and cream are highly perishable products. Some cream products are *ultra-pasteurized* to extend their shelf life. By heating the product to a much higher temperature (275°F/135°C) for 4 seconds, this process kills not only disease-causing bacteria but nearly all organisms that cause spoilage. Ultra-pasteurized products must still be refrigerated both before and after opening.

*Ultra-High-Temperature (UHT) pasteurization* involves even higher temperatures. The resulting product is packed into sterile cartons. If the cartons are unopened, the milk will keep at room temperature for up to 10 months. Once opened, the milk must be refrigerated like regular pasteurized milk. UHT milk has a somewhat cooked taste and is better suited to cooking than for drinking as a beverage.

### FRESH MILK PRODUCTS

*Whole milk* is fresh milk as it comes from the cow, with nothing removed and nothing (except vitamin D) added. It contains about 3.5 percent fat (known as *milk fat* or *butterfat*), 8.5 percent nonfat milk solids, and 88 percent water.

*Skim* or *nonfat milk* has had most or all of the fat removed. Its fat content is 0.5 percent or less.

*Low-fat milk* has a fat content of 0.5 to 2 percent. Its fat content is usually indicated, usually 1 percent or 2 percent.

*Fortified nonfat* or *low-fat milk* has had substances added to increase its nutritional value, usually vitamins A and D and extra nonfat milk solids.

*Flavored milks*, such as *chocolate milk*, have had flavoring ingredients added. A label such as *chocolate milk drink* or *chocolate-flavored drink* indicates the product does not meet the standards for regular milk. Read ingredient labels.

Except, of course, for nonfat milk, natural liquid milk contains fat, which, because it is lighter than water, will gradually separate and float to the top in the form of cream. *Homogenized milk* has been processed so the cream doesn't separate. This is done by forcing the milk through very tiny holes, which breaks the fat into particles so small they stay distributed in the milk. Nearly all liquid milk on the market has been homogenized.

### FRESH CREAM PRODUCTS

*Whipping cream* has a fat content of 30 to 40 percent. Within this category, you may find light whipping cream (30 to 35 percent) and heavy whipping cream (36 to 40 percent). Whipping

cream labeled *ultra-pasteurized* keeps longer than regular pasteurized cream. Pure ultra-pasteurized cream does not whip as well as regular pasteurized cream, so additives such as vegetable gums are added to it to make it more whippable.

**Light cream**, also called *table cream* or *coffee cream*, contains 18 to 30 percent fat, usually about 18 percent.

**Half-and-half** has a fat content of 10 to 18 percent, too low to be called *cream*.

## FERMENTED MILK AND CREAM PRODUCTS

**Sour cream** has been cultured or fermented by added lactic acid bacteria, which makes it thick and slightly tangy in flavor. It has about 18 percent fat.

**Crème fraîche** (kremm fresh) is a slightly aged, cultured heavy cream. It is widely used for sauce making in Europe because of its pleasant, slightly tangy flavor and its ability to blend easily into sauces. Unlike regular heavy cream, it usually doesn't require tempering and can be added directly to hot sauces. It is available commercially but is expensive. A close approximation can be made by warming 1 quart (1 L) heavy cream to about 100°F (38°C), adding 1½ ounces (50 mL) buttermilk, and letting the mixture stand in a warm place until slightly thickened, 6 to 24 hours.

**Buttermilk** is fresh, liquid milk, usually skim milk, which has been cultured or soured by bacteria. It is usually called *cultured buttermilk* to distinguish it from the original buttermilk, which was the liquid left after butter making. Buttermilk is used in recipes calling for sour milk.

**Yogurt** is milk (whole or low-fat) cultured by special bacteria. It has a custardlike consistency. Most yogurt has additional milk solids added, and some of it is flavored and sweetened.

## MILK PRODUCTS WITH WATER REMOVED

**Evaporated milk** is milk, either whole or skim, with about 60 percent of the water removed. It is then sterilized and canned. Evaporated milk has a somewhat cooked flavor.

**Condensed milk** is whole milk that has had about 60 percent of the water removed and is heavily sweetened with sugar. It is available canned and in bulk.

**Dried whole milk** is whole milk that has been dried to a powder. **Nonfat dry milk** is skim milk that has been dried in the same way. Both are available in regular form and in instant form, which dissolves in water more easily.

## Artificial Dairy Products

A wide variety of imitation cream and dessert topping products are made from various fats and chemicals, which are listed on the label. They are used in some institutions because they keep longer and are generally less expensive than dairy products. Some people feel they are acceptable, but many find their flavors objectionable.

## Problems in Cooking Milk and Cream Products

### CURDLING

**Curdling** is a process by which milk proteins solidify and separate from the whey. Curdling is usually caused by acids, tannins, salt, and heat. The mild acids in many vegetables and the tannins in potatoes are often enough to curdle milk.

Starches partially stabilize milk and cream. This is why it is possible to make soups and sauces with both milk or cream and acid ingredients. Avoid combining milk or cream with strong acids unless a starch is present.

Reducing temperatures and cooking times also helps. Curdling is more likely at high heat or with prolonged cooking.

Salt lightly, unless the milk has been stabilized by starch.

When adding milk or cream to a hot liquid, heat it first in a separate pot, or temper it by stirring a little of the hot liquid into it first.

Reconstituted dry milk is more likely to curdle than fresh milk.

### SCORCHING

**Scorching** occurs when milk that is being heated coagulates on the bottom of the pan due to high heat. This deposit is likely to burn if cooking continues.

Figure 25.1 Whipping cream.



(a) The cream has begun to thicken.



(b) The cream has reached the soft-peak stage. Stop at this stage if the cream is to be folded into a batter or other mixture.



(c) The cream has reached the firm-peak stage. Whipping beyond this stage causes the cream to break or separate.

### EUROPEAN BUTTERS

As explained in the text, typical European butters have a higher fat content and lower moisture content than American butters.

A second difference is in the type of cream used. Most North American butters are made from fresh cream and are called *sweet cream butter*. By contrast, many European butters are made from slightly cultured cream, somewhat like *crème fraîche* (p. 835). This gives the butter a more complex, richer flavor.

To avoid scorching, heat milk in a double boiler, steamer, or steam-jacketed kettle rather than over direct heat.

### SKIN FORMATION

The formation of scum or skin on top of heated milk or milk sauces is caused by coagulation of proteins in contact with air. Prevent it by covering the utensil or by coating the surface with a layer of melted fat.

## Whipping Cream

Cream with a fat content of 30 percent or more can be whipped into a foam (see Figure 25.1). One quart or liter of cream produces up to 2 quarts or liters of whipped cream.

For the best results, observe the following guidelines:

1. Have cream and all equipment well chilled.
2. Do not sweeten until the cream is whipped. Sugar decreases stability and makes the cream harder to whip. Use powdered sugar instead of granulated sugar for best stability.
3. Do not overwhip. Stop beating when the cream forms stiff peaks. If it is whipped longer, it first becomes granular and then turns into butter and whey.
4. Cream to be folded into other ingredients should be underbeaten because the action of folding it in whips it more and may overwhip it.

## Butter

### Butter Characteristics and Grades

Fresh *butter* in the United States and Canada consists of about 80 percent milk fat. The remainder is milk solids and water.

In Europe, butter often has a higher fat content, usually around 82 percent. Some manufacturers in North America have begun processing and selling European-style butters with this higher fat content. They are intended to replicate the qualities of European butters in cooking and baking.

In the United States, butter is graded according to USDA standards for flavor, body, color, and salt content, although grading is not mandatory. Grades are AA, A, B, and C. Most operations use grades AA and A because the lower grades may have off flavors.

Most butter on the market is lightly salted. A maximum of 2 percent salt is permitted.

*Unsalted butter* is more perishable but has a fresher, sweeter taste.

Because of its flavor, butter is the preferred cooking fat for most purposes. It has no equal in sauce making and is used as a sauce itself, as discussed in Chapter 8.

*Clarified butter* (see p. 192 for production procedure) is used as a cooking fat more often than whole butter because the milk solids in whole butter burn easily.

The smoke point of butterfat is only 300° to 350°F (150° to 175°C), so another product, such as vegetable oil, should be used when high cooking temperatures are required.

### Storing

Have you ever been served butter that tasted like onions? Butter absorbs odors and flavors easily, so it should be kept well wrapped and away from foods that might transfer odors to it in the refrigerator.

Best storage temperature is 35°F (2°C).

## Margarine

**Margarine** is a manufactured product meant to resemble butter in taste, texture, and appearance. It is made from vegetable and animal fats, plus flavoring ingredients, emulsifiers, coloring agents, preservatives, and added vitamins. Like butter, it is about 80 percent fat. Diet and low-fat margarines have less fat and a much higher water content, so they can't be used in cooking like butter or regular margarine.

Flavors of different brands should be evaluated carefully because they vary considerably. Margarine should have a reasonably clean, fresh flavor, although you should not expect even the best to taste like high-grade butter.

Margarines that include an emulsifier called *lecithin* foam and brown like butter when heated. Those without lecithin do not. In all other respects, margarine is handled and stored like butter.

### KEY POINTS TO REVIEW

- What are three types of pasteurization? Describe them.
- What are the major milk, cream, and butter products?
- What is curdling? How can it be prevented? How can scorching of milk products be prevented during cooking?
- What guidelines should be observed when whipping cream?

## Cheese

### Composition

Cheese is a food produced by separating milk solids from whey by curdling or coagulation. This curdling is brought about by introducing selected bacteria or an enzyme called *rennet* into the milk (see sidebar). The resulting curds are drained, processed, and cured or aged in a variety of ways. The liquid that drains from the curds is called *whey*.

Processing techniques are so numerous that from a single basic ingredient (milk from cows, sheep, or goats) it is possible to produce hundreds of kinds of cheese, from cottage cheese to parmesan, from cheddar to Swiss, from blue to Limburger. Variables that produce these differences include the type of milk used, the method of curdling and the temperatures during curdling, the method of cutting and draining the curd, the way the curds are heated, pressed, or handled, and all the conditions of ripening or curing.

**Ripening** is the process that converts freshly made curds into distinctive, flavorful cheeses. Ripening is brought about by certain bacteria or molds that are introduced during manufacture. Much of a cheese's final character is determined by its ripening agent and the way it acts on the cheese.

Cheeses can be classified by the way in which they are ripened.

*Bacteria ripened from inside*, such as cheddar, Swiss, Gouda, and parmesan. This category includes most hard-ripened and hard grating cheeses. These ripen uniformly throughout the interior.

*Washed-rind cheeses*, such as Limburger and Liederkranz. These are so called because the surface of each cheese is periodically washed with a salt brine solution during the first stages of aging and ripening. Washed-rind cheeses usually have an orange or reddish rind that is thinner than the mold rind of mold-ripened cheeses. They usually become softer as they ripen. Many washed-rind cheeses have a pungent aroma when ripe.

### RENNET AND VEGETARIAN DIETS

The most commonly used curdling agent in cheese production is rennet, as the text explains. Most traditional cheeses are made with rennet extracted from the stomach lining of calves. As a result, vegetarians usually avoid such cheeses. However, rennet derived from a plant base is also available. Cheeses made with a vegetable-based rennet can be included in the diets of lacto-vegetarians. In addition, some cheeses are made without rennet but with other curdling agents, such as citric acid or other mild acid.



Top row: Morbier, cheddar, and fontina.  
Bottom row: Tilsit, baby Gouda, and Emmentaler.



Washed-rind cheeses, clockwise from left: Époisses, Livarot, Limburger, and Reblochon.



Blue-veined cheeses, clockwise from left: Stilton, Cabrales, Roquefort, and Bleu d'Auvergne.



Top row: Brie, Explorateur, Taleggio.  
Bottom row: Camembert, Edel de Cleron.



Unripened cheeses. Back row: queso blanco, ricotta, fresh mozzarella.  
Front row: string cheese, cream cheese, fresh chèvre, and Boursin.

*Blue-veined cheeses*, such as Roquefort and Stilton. These contain mold cultures that spread through the interior of the cheese.

*Mold-rind cheeses*, such as Brie, Camembert, and St. André. These have a mold crust or rind that is white and velvety when the cheese is young but that may darken or become mottled with orange or brown as the cheese ages.

*Unripened cheeses*, such as cottage, cream, and baker's cheese.

The three major components of cheese are water, fat, and protein. The water content of cheese ranges from about 80 percent for a fresh, soft cheese like cottage cheese to about 30 percent for a very hard, aged cheese like parmesan.

The fat content of cheese, when it is listed on a label, generally refers to the percentage of solids. In other words, if a cheddar cheese has a 50 percent fat content, this means the cheese would be 50 percent fat if all the moisture were removed. In fact, the cheese may have a moisture content of about 40 percent, and its actual fat content may be about 30 percent of the total.

*Double-crème* (at least 60 percent fat) and *triple-crème* (at least 75 percent fat, dry weight) are very rich cheeses. Most of these styles of cheese originated in France, but they have become popular and are now made in many countries. Most of them fall into the unripened, soft-ripened, or blue-veined categories, discussed on the next page.

## Varieties

Hundreds, possibly even thousands, of cheeses are produced in North America and Europe. The following is a representative sampling of most of the types of cheese commonly available. See also the accompanying photographs.

### UNRIPENED CHEESES

These are soft, white, freshly made cheeses.

*Cottage cheese* is a moist, loose-curd cheese that may or may not have cream added. *Baker's cheese* or *pot cheese* is similar but drier. Baker's cheese is used in cheesecakes and pastry.

*Ricotta cheese* is sometimes called *Italian cottage cheese*, but it is smoother, moister, and sweeter than cottage cheese. Traditional ricotta is made from whey, but most ricotta in the North American market is made from fresh milk.

*Cream cheese* is a smooth, mild cheese with a high fat content. It is extensively used in making sandwiches, canapés, and hors d'oeuvres and in baking.

*Neufchâtel* is similar to cream cheese, but it has less fat. An Italian cream cheese called *mascarpone* is very soft and rich, and it looks almost like whipped cream. It has a slightly tangy taste that goes well with fruits as a dessert.

*Mozzarella* is a soft, mild cheese made from whole milk or part skim milk. It has a stringy texture that comes from being pulled and stretched during production. It is widely used in pizzas and Italian-style dishes. The freshly made mozzarella one finds in Italian neighborhoods is moister and more tender than the packaged varieties.

*Mozzarella di bufala*, made from the milk of water buffaloes, is imported from Italy and is available in some areas at a somewhat high price. It is much softer and more delicate in texture than regular mozzarella, and it has a slightly acidic flavor that is refreshing.

*Feta* is a crumbly, curdy cheese that originated in Greece and other Balkan countries. Instead of being aged or cured, it is pickled in brine. This, plus the fact that it is generally made from goat's or sheep's milk, gives it a distinctive and salty flavor.

### SEMISOFT CHEESES

*Bel Paese* and *fontina* from Italy, *Port Salut* from France, and American *muenster* and *brick* cheeses are the best known of a large group of cheeses that range from bland and buttery when young to more earthy and full-flavored when older. They are often used as dessert cheeses and as hors d'oeuvres.

France produces many washed-rind soft cheeses with orange rinds and with flavors that range from mild to pungent. Among the better-known ones are *Pont l'Évêque* and *Livarot* from Normandy and *Munster* from Alsace. (These cheeses might also be categorized as soft-ripened cheeses, below, although they may not become as soft and runny as the washed-rind cheeses discussed in the next section.)

### SOFT-RIPENED CHEESES

These cheeses ripen from the outside toward the center. When very young, they are firm and cakey and have little flavor. As they mature, they gradually become softer and, when fully ripe, may be actually runny. The ripening starts just inside the rind and spreads to the center.

Soft-ripened cheeses include two categories: mold-ripened and washed-rind or bacteria-ripened.

*Brie* and *Camembert* from France are ripened by mold. They are made in flat, round shapes and are covered with a crust that varies in color from white to straw. When ripe, these cheeses are creamy and flavorful, but they develop a sharp odor of ammonia when overripe.

Many rich double- and triple-crème cheeses fall into this category, including *Explorateur*, *Brillat-Savarin*, *St. André*, *Boursault*, and *Boursin* (which may be flavored with pepper or with garlic and herbs). *Chaource* is similar in texture and appearance to a double-crème cheese but is actually closer in composition to Brie, having a fat content of 45 to 50 percent.

*Liederkrantz*, made in the United States, and its Belgian cousin, *Limburger*, are ripened by bacteria rather than mold, but they also become softer as they age. They are widely misunderstood because of their aroma. Actually, when not overripe, these cheeses are not nearly as strong as most people expect, and they have a pleasant, smooth texture.



Buffalo mozzarella



Feta



Port Salut



Brie





Cheddar

*Époisses* from Burgundy, France, is one of the great soft-ripened washed-rind cheeses. Small cheeses are packed individually in round wooden boxes. They are so soft when ripe that they are left in their boxes and served with a spoon.

## HARD CHEESES

These are cured cheeses with a firm texture and varying degrees of mildness or sharpness, depending on their age.

*Cheddar* is an English invention, but American versions are so popular in the United States that it is often thought of as a distinctly American cheese. It ranges in flavor from mild to sharp and in color from light yellow to orange. Cheddar is eaten as is and is also widely used in cooking. *Colby* and *Monterey jack* are similar to very mild cheddars. *Monterey jack* is usually sold when quite young. In this case, it is more like American muenster and belongs in the semisoft category.

Swiss-type cheeses are also popular. They are produced in many countries, but the original Swiss cheese from Switzerland, *Emmentaler*, is perhaps the most flavorful. These are very firm, slightly rubbery cheeses with a nutty taste. Their large holes are caused by gases formed during ripening. *Gruyère* is another Swiss-type cheese from either Switzerland or France. It has smaller holes and a sharper, earthier flavor. *Gruyère* is important in cooking, and both it and *Emmentaler* are widely used for sauces, soufflés, fondue, and gratinéed items. Other cheeses related to Swiss are *Comté* from France, *Appenzeller* and *Raclette* from Switzerland, and *Jarlsberg* from Norway.

*Edam* and *Gouda* are the familiar round Dutch cheeses with the yellow and red wax rinds. Hard in texture, with a mellow, nutlike flavor, they are often seen on buffet platters and among dessert cheeses.

*Provolone* is an Italian cheese that resembles mozzarella when very young, but it becomes sharper as it ages. It is also available smoked.



Clockwise from top: Emmentaler, gorgonzola, provolone, Gruyère, Gouda, Locatelli Romano, Pont l'Évêque, baby Gouda; Lower center: Livarot.

## BLUE-VEINED CHEESES

These cheeses owe their flavor and appearance to the blue or green mold that mottles their interiors. The most famous of the blue cheeses is *Roquefort*, made in France from sheep's milk and cured in limestone caves near the town of Roquefort. *Stilton*, from England, is a mellow, firmer blue cheese that the English call "Roquefort with a college education." Italy's *gorgonzola* is a soft, creamy cheese with an unmistakable pungency. Spanish *Cabrales* is a mellow but intensely flavorful blue cheese. Blue cheeses made in Denmark and in the United States are also widely used.

Less widely known but worth seeking out are a number of special blues, including *Bleu de Bresse*, *Fourme d'Ambert*, and *Pipo Crem'* from France, *Saga* from Denmark, and *Bavarian Blue* and *Blue Castello* from Germany. The last four of these are double- or triple-crèmes.



Jarlsberg



Edam



Blue Stilton



Gorgonzola

## GOAT CHEESES

Cheeses made from goat's milk are produced in dozens of varieties in France, where this type of cheese, called *chèvre* (shev r', or shev), is very popular. It has also become well known in the United States, which now has many producers. With a few exceptions, most goat cheeses are small, ranging in size from tiny buttons to logs, cakes, cones, and pyramids weighing up to 5 or 6 ounces (140 to 170 g).

Fresh, unaged *chèvres* are the most popular and the mildest in flavor. Their paste is very white, with a soft but interestingly dry texture. They have a distinctive peppery, slightly acidic taste. The most widely available fresh French *chèvre* is probably the cylindrical *Montrachet*, either plain or with a coating of edible ash. Other fresh goat cheeses, both domestic and imported, may be available in different localities, and many have no name other than *chèvre*.

As goat cheese ages it becomes firmer, and the peppery, acidic flavor becomes stronger. Cheeses two or three months old can be quite powerful, while the youngest might taste almost like the unaged ones. Some names of *chèvres* are *Boucheron*, *Banon* (wrapped in chestnut leaves), *Pyramide*, *Crottin de Chavignol*, *Chabis*, and *Rocamadour*. *Saint-Marcellin* is made of part goat's milk and part cow's milk. Shaped into small disks, it softens rather than hardens as it ripens.

## HARD GRATING CHEESES

The hard grating cheeses, typified by Italian *parmesan*, are called *grana* cheeses, referring to their grainy textures. The best of all *granas* is called *Parmigiano-Reggiano*. It is the true parmesan, aged at least two years, and it is very expensive. It is imitated widely around the world, and the imitations vary from bad to very good. Another Italian *grana* is *Romano*. Italian Romanos are made with sheep's milk, but American versions are usually made with cow's milk. *Romano* is stronger and saltier than parmesan.

These cheeses are often sold already grated. This is a convenience for commercial kitchens, of course, but, unfortunately, pre-grated cheese has much less flavor than freshly grated cheese. A merchant was once arrested for selling what he claimed was grated parmesan cheese but was actually grated umbrella handles. A large share of pre-grated cheese sold today resembles grated umbrella handles in flavor.

## PROCESS CHEESES

Up to now, we have been talking about so-called natural cheeses, made by curdling milk and ripening the curds. *Process cheese*, by contrast, is manufactured by grinding one or more natural cheeses, heating and blending them with emulsifiers and other ingredients, and pouring the mixture into molds to solidify. Process cheese is a uniform product that does not age or ripen like natural cheese. Thus, it keeps very well. It is usually mild in flavor and gummy in texture.

Because of its melting quality and low price, it is often used in cooking. However, it is not as good a value as its price implies. Because it is relatively flavorless, you have to use much more of it to get the same flavor as from a smaller quantity of sharp cheddar.

In addition to its price and keeping qualities, the chief advantages of process cheese are that it melts easily and that its blandness appeals to many people who don't like more flavorful cheese.

*American cheese* usually refers to process cheese, although some people use this name for cheddar. In the United States, most process cheeses are made from cheddar, while European process cheeses more often contain Swiss-type cheeses. Among them is a process cheese called *Gruyère*, which bears little resemblance to true *Gruyère*.

*Process cheese food* and *process cheese spread* contain a lower percentage of cheese and more moisture than a product labeled simply *process cheese*. *Cold pack* or *club cheese*, on



*Chèvre*



Goat cheeses, top row: Boucheron, Humboldt Fog, and Valençay; Bottom row: Banon and button *chèvres*.



Hard cheeses, clockwise from top left: Parmigiano-Reggiano, Caerphilly, dry jack, Pecorino Romano, and aged Gouda.

the other hand, is not heated and pasteurized like process cheese but is simply ground and mixed with flavorings and seasonings to a spreadable consistency. Some brands are fairly flavorful.

### NORTH AMERICAN ARTISAN CHEESES

Many of the fine cheeses from France, Italy, and other European countries, including many of those listed above, are handmade in small batches. By contrast, until recently, nearly all the cheese produced in North America was made by large industrial concerns.

In recent years, the production of small-batch artisan cheeses in North America has skyrocketed. This development has been stimulated, no doubt, by the adoption of the European practice of offering a cheese course after dinner in fine dining establishments. Increased interest in specialty cheeses has created a new market for these products. North American chefs have made their cheese menus into showcases for fine local cheeses.

The American Cheese Society offers the following definitions of limited-production cheeses:

*Specialty cheese* is cheese of limited production, with particular attention to natural flavor and texture profiles. Specialty cheeses may be made from all types of milk and may include flavorings.

*Artisan* or *artisanal cheese* is cheese produced primarily by hand, in small batches, with particular attention to the tradition of the cheese-maker's art and using as little mechanization as possible.

*Farmstead cheese* is cheese made with milk from a farmer's own herd or flock on the farm where the animals are raised. No milk from an outside source may be used.

European cheeses are the product of hundreds of years of tradition and include nearly every type of cheese imaginable, so it is natural that North American producers looked to European cheeses as models. At the same time, the best producers have also tried to develop distinctive products that set new standards of quality. Today, cheese producers all across Canada and the United States produce cheeses that compare in quality with the best from Europe.

It is impossible in a short space to list all the fine artisan and farmstead cheeses in North America. The following are just small random samples of the hundreds of varieties from many regions.

#### Fresh unripened cheeses

Mozzarella Company Mascarpone, Texas	Silani Sweet Cheese Ricotta, Ontario
Shepherd's Way Ricotta (sheep's milk), Minnesota	

#### Soft washed-rind cheeses

Harvest Moon, Colorado	Le Douanier, Québec
Cowgirl Creamery Red Hawk, California	Colo Rouge, Colorado

#### Mold-rind soft-ripened

Blythedale Farm Brie and Camembert, Vermont	Bittersweet Plantation Fleur-de-Teché Triple Cream, Louisiana
Groupe Fromage Côté Triple Crème, Quebec	Sweet Grass Dairy, Georgia

#### Hard cheeses

Roth Kase Gruyère, Wisconsin	BelGioioso Romano, Wisconsin
Gort's Gouda, British Columbia	Carr Valley Canaria, Wisconsin
Sylvan Star Gouda, Alberta	McCadam Cheddar, New York
Mona (sheep and cow's milk blend), Wisconsin	

### Blue cheeses

Rogue River Blue, Oregon	Point Reyes Blue, California
Dragon's Breath, Nova Scotia	Hubbardston Blue, Massachusetts
Firefly Farms Mountain Top Blue, Maryland	

### Goat cheeses, fresh and aged

Vermont Butter and Cheese Company, Chèvre, Vermont	Fromagerie Bergeron Patte Blanche, Québec
Humboldt Fog, California	Capriole Pipers Pyramid, Indiana

## Storage and Service

### STORING

Keeping qualities of cheese vary considerably. In general, *the firmer and more aged the cheese, the longer it will keep*. Cottage cheese must be used within a week, while a whole, uncut parmesan may keep a year or more.

Soft-ripened cheeses like Brie, Camembert, and Liederkranz deteriorate rapidly once they reach maturity. They are difficult cheeses to purchase because in their whole lifespan there may be only one week when they are neither underripe nor overripe.

Other ripened cheeses are not as fussy, as long as you store them under refrigeration and well wrapped to prevent drying. Cut cheeses dry especially quickly, so they must be wrapped in plastic at all times.

### SERVING

*Serve cheese at room temperature.* This is the single most important rule of cheese service. Only at room temperature will the full flavors develop. (This does not apply to unripened cheese like cottage cheese.)

Cut cheese just before service to prevent drying. Better yet, set out whole cheeses and large pieces when possible so portions can be cut to order by the customer or service personnel.

## Cooking with Cheese

Three varieties of cheese account for the majority of cheese used in cooking. *Cheddar* is the most frequently used in North American dishes, especially in sauces, as a casserole ingredient, and as a melted or gratinéed topping. *Swiss-type* cheeses are used more often in European-style dishes. Emmentaler and Gruyère are essential ingredients in fondue, Mornay sauce, gratinéed dishes, soufflés, and quiches. *Parmesan-type* cheeses are used in grated form for toppings and for seasoning and flavoring purposes.

### Guidelines for Cooking with Cheese

1. Use low temperatures. Cheese contains a high proportion of protein, which toughens and becomes stringy when heated too much. Sauces containing cheese should not be boiled.
2. Use short cooking times, for the same reasons. Cheese should be added to a sauce at the end of cooking. Stirring it into the hot sauce *off the heat* is usually enough to melt it.
3. Grate cheese for faster and more uniform melting.
4. Aged cheeses melt and blend into foods more easily than young cheeses.
5. Aged cheeses add more flavor to foods than young, mild cheeses, so you need less of it.

### KEY POINTS TO REVIEW

- What are five categories of cheese based on type of ripening? Give examples of each category.
- How should cheese be stored and served?
- What guidelines should be observed when cooking with cheese?

## Welsh Rabbit

PORTIONS: 25 PORTION SIZE: 4 OZ (125 G)

U.S.	METRIC	INGREDIENTS
3 tbsp	45 mL	Worcestershire sauce
2 tsp	10 mL	Dry mustard
pinch	pinch	Cayenne
2½ cups	625 mL	Beer or ale
5 lb	2.5 kg	Sharp cheddar cheese, grated

### PROCEDURE

1. Mix the Worcestershire sauce and spices in a heavy saucepan.
2. Add the beer or ale. Heat almost to a simmer.
3. Set the pan over very low heat. Add the grated cheese, a little at a time. Stir constantly. Continue to stir over low heat until the mixture is smooth and thick.
4. Remove from heat. The mixture may be kept warm in a steam table or bain-marie, but it is better if served immediately.

25 slices 25 slices White bread

5. Toast the bread.
6. For each portion, place a slice of hot toast on a plate. Ladle 4 fl oz (125 mL) cheese mixture over the toast. Serve.

**Per serving:** Calories, 470; Protein, 26 g; Fat, 31 g (60% cal.); Cholesterol, 95 mg; Carbohydrates, 19 g; Fiber, 1 g; Sodium, 750 mg.

**Note:** This dish is sometimes called Welsh Rarebit, although Rabbit is the original name.

## Sirniki (Russian Fried Cheese Cakes)

PORTIONS: 25 PORTION SIZE: 3½ OZ (100 G)

U.S.	METRIC	INGREDIENTS
5 lb	2.3 kg	Pot cheese
6 oz	175 g	Bread flour
8	8	Egg yolks
½ tsp	2 mL	Salt
2 oz	60 g	Sugar
as needed	as needed	Butter for frying

### PROCEDURE

1. Place the pot cheese in a strainer lined with cheesecloth. Fold the overhanging cloth over the top of the cheese so it is covered. Set the strainer over a bowl and refrigerate 24 hours to drain the cheese.
2. Force the cheese through a sieve or food mill into the bowl of a mixer.
3. Add the flour, egg yolks, salt, and sugar.
4. With the paddle attachment, mix until smooth.
5. Divide the dough into 3 parts. Roll each part into a cylinder about 3 in. (7.5 cm) thick. Wrap in plastic film. Refrigerate 2 hours or more.
6. At service time, cut the cheese rolls into cakes about ¾ in. (2 cm) thick.
7. Heat about ⅛ in. (3 mm) butter in a heavy sauté pan. Pan-fry the cakes over low heat until golden brown on both sides. Turn very carefully with a spatula.

as needed as needed Confectioners' sugar  
2½ pt 1.2 L Sour cream

8. Plate the cakes and sprinkle lightly with confectioners' sugar. Place about 1½ tbsp (20 mL) sour cream on the plate next to the cake. Serve immediately.

**Per serving:** Calories, 350; Protein, 18 g; Fat, 23 g (63% cal.); Cholesterol, 130 mg; Carbohydrates, 12 g; Fiber, 0 g; Sodium, 480 mg.

**Note:** This dish is often served as a main course for brunch or lunch. In this case, portion sizes may be increased. Sirniki may also be served with strawberry or other preserves.

## Swiss Fondue

PORTIONS: 4 PORTION SIZE: 8 OZ (250 G)

U. S.	METRIC	INGREDIENTS
1	1	Garlic clove
1 pt	500 mL	Dry white wine
1 lb	500 g	Swiss Emmentaler cheese, or half Emmentaler and half Gruyère, grated
1 tsp	5 mL	Cornstarch
3 tbsp	45 mL	Kirsch (see Note)
to taste	to taste	Salt
to taste	to taste	White pepper
to taste	to taste	Nutmeg

### PROCEDURE

1. Cut the garlic clove in half. Rub the inside of a 1½-qt (1.5-L) fondue pot or casserole with the garlic.
2. Add the wine to the pot and set over moderate heat. Heat the wine until it is hot but not simmering. Do not boil.
3. Add the cheese to the wine, about one-fourth at a time. Stir well between each addition.
4. Dissolve the cornstarch in the kirsch. Stir into the cheese mixture. Stir over very low heat until smooth and slightly thickened.
5. Season to taste with salt, white pepper, and just a trace of nutmeg.

2	2	Small loaves French bread, cut into bite-size pieces
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6. Set the casserole over a chafing dish heating element for service. Serve the bread cubes in baskets. To eat fondue, the diner spears a cube of bread on a special fondue fork and swirls it in the cheese mixture, which is kept hot over the heating element.

**Per serving:** Calories, 870; Protein, 43 g; Fat, 35 g (36% cal.); Cholesterol, 105 mg; Carbohydrates, 70 g; Fiber, 3 g; Sodium, 1000 mg.

**Note:** Kirsch is a white (that is, clear) alcoholic beverage distilled from cherries. While it is traditional in Swiss fondue, it may be omitted if unavailable. In this case, dissolve the cornstarch in cold water, or mix it with the grated cheese.

## Cheese Wafers

YIELD: ABOUT 150 WAFERS

U. S.	METRIC	INGREDIENTS
1 lb	500 g	Sharp cheddar cheese, grated
8 oz	250 g	Butter, softened
12 oz	375 g	Bread flour
½ tsp	2 mL	Salt
¼ tsp	1 mL	White pepper

**Per 1 wafer:** Calories, 30; Protein, 1 g; Fat, 2.5 g (65% cal.); Cholesterol, 5 mg; Carbohydrates, 2 g; Fiber, 0 g; Sodium, 40 mg.

### VARIATIONS

#### Cheese Straws

Roll out the dough like pie dough, slightly less than ¼ in. (0.5 cm) thick. Cut into strips, ¼ × 3 in. (0.5 × 7.5 cm). Bake as in basic recipe.

### PROCEDURE

1. Combine all ingredients in the bowl of a mixer. Mix at low speed with the paddle attachment until the mixture forms a dough.
2. Remove from the mixer and knead lightly on a floured board until the dough holds together well.
3. Divide the dough into 4 or 5 pieces. Roll each piece into a cylinder 1 in. (2.5 cm) in diameter. Wrap in waxed paper or plastic film and chill.
4. Slice the dough into thin rounds a little less than ¼ in. (0.5 cm) thick. Place on greased baking sheets.
5. Bake at 450°F (230°C) about 10 minutes, or until crisp and lightly browned.
6. Serve hot or cold as an hors d'oeuvre or as a soup accompaniment.

# COFFEE AND TEA

## Coffee

Many people judge a restaurant by its coffee. Regardless of the quality of the food, one of the things they are most likely to remember about an establishment is whether the coffee is good or bad.

Whether or not that seems fair to you, it is at least a clear signal that you ought to learn to make coffee properly. Coffee making is a simple procedure. All you do is pass hot water through ground coffee. The care with which you perform this operation, paying attention to all the details, makes the difference between a rich, aromatic, satisfying beverage and a bitter, unpleasant liquid.

### Varieties, Roasts, and Blends

Coffee beans are harvested as berries from a tropical shrub. Two species of coffee account for nearly all the beans grown worldwide: *Arabica* coffees are delicate plants, difficult to grow. Nevertheless, they supply 65 to 75 percent of the world's coffee. Most of the finest coffees are from arabica beans. *Robusta* coffee plants are hardier and easier to grow. Most ordinary supermarket coffee is made from robusta beans, but robusta can also yield beans of very high quality.

Each coffee berry contains two seeds. The harvested berries are fermented and hulled, yielding green or gray-green coffee beans. The green beans are roasted to develop their flavor. The degree of roasting—light, medium, dark—affects the flavor. Most Americans drink medium roast, sometimes called *city roast*, while darker roasts, sometimes called *Viennese roast* (medium dark) and *French roast* (very dark), are popular in Europe and increasingly popular in North America. The darkest roast, *espresso roast*, is nearly black and is brewed using a special process discussed below.

Coffee is grown in many tropical countries, and each producing area is known for certain quality and flavor characteristics. Excellent coffees are grown in Colombia, Brazil, Venezuela, Mexico, Jamaica, Hawaii, Indonesia, and nations in Africa and the Middle East.

Most ground coffees are blends of several varieties. Blending enables the processor to combine desirable quantities from a number of beans to produce a well-balanced beverage.

Coffee may be purchased in whole bean or ground form. Whole beans stay fresh longer, but unopened vacuum packs of ground coffee keep well for a week or two and, for many establishments, are the easiest and most economical way to buy coffee. Ground coffee, once opened, should be kept in airtight containers and used within a few days. Better yet, buy ground coffee in premeasured packs suitable for your brewing equipment. Whole beans keep several weeks once opened and months in the freezer. The best practice, though, is to have frequent small deliveries so you always have the freshest coffee on hand.

Brewing procedures for fresh coffee are discussed in the procedures below.

In addition to the standard cup of regular hot coffee, the following coffee drinks are sometimes served.

1. **Instant coffee** is a powdered, soluble extract from coffee beans. To simplify somewhat, instant coffee is made by brewing regular coffee and drying it. In the process, the coffee loses a portion of its flavor and aroma. Most coffee lovers agree that it does not taste as good as freshly brewed coffee. Instant coffee is rarely used in food service.
2. **Decaffeinated coffee.** Caffeine is a chemical stimulant that occurs naturally in coffee, tea, and chocolate. Decaffeinated coffee is coffee from which the caffeine has been



Coffee roast varieties, left to right: city roast, medium dark roast, French roast.

## Basic Principles of Coffee Making

Coffee is made by extracting flavors from ground coffee beans by dissolving them in hot water. The essence of making good coffee is to extract enough of these solids to make a flavorful beverage, but not to brew so long as to extract those solids that make the coffee bitter.

With this principle in mind, study the following guidelines for making good coffee. The list is long, and every item is important.

### 1. Use fresh coffee.

Once it is ground, coffee loses flavor and aroma rapidly. To maintain freshness, store coffee, tightly sealed, in a cool, dry place. Even with the best storage, however, you should not use coffee more than a week old. Vacuum-packed coffee keeps longer, but it too deteriorates as soon as it is opened. If you can't grind your own coffee daily (some restaurants do), at least you can arrange for frequent delivery.

### 2. Use the right grind and the right brewing time.

A coarse grind requires more time for extraction than a fine grind. You must use the grind that is suited to your equipment.

<i>Grind</i>	<i>Extraction Time</i>
Fine or vacuum	2 to 4 minutes
Drip or urn	4 to 6 minutes
Regular (percolator)	6 to 8 minutes

### 3. Use the right proportions.

Always measure. Recommended proportions are 1 pound of coffee and 1¼ to 2½ gallons of water (500 g coffee and 7.5 to 10.5 L water), depending on the strength desired.

To make weaker coffee, add more hot water after removing the used grounds. Using more water while actually making the coffee extends the brewing time, resulting in overextraction and bitterness. In fact, many experts feel that passing no more than 2 gallons of water through 1 pound of ground coffee (8 L to 500 g) and then diluting to taste is the surest way to avoid bitterness.

Coffee strength is a matter of customer preference and varies from region to region. For example, people in New York generally prefer stronger coffee than people in Chicago. In some areas, the preferred ratio is 1 pound (500 g) coffee to 3 gallons (12 L) water.

### 4. Use fresh water.

Fresh, cold water brought to a boil contains dissolved air. Water that has been kept hot for a long time does not, so it tastes flat, and it makes flat-tasting coffee.

Tap water is usually best to use. Special filtration systems are available for tap water that has off flavors or is heavily chlorinated. Do not use chemically softened water.

### 5. Use water at the right brewing temperature: 195° to 200°F (90° to 93°C).

Water that is too hot extracts bitter solids. Water that is too cold does not extract enough flavor and yields coffee that is too cool for serving.

### 6. Use a good brewing procedure.

Most operations use either urns, for large volume, or automatic drip makers, which make one pot at a time, as shown in the photograph. These machines can make excellent coffee because water passes through the grounds only once.

Percolator-type coffee makers should not be used. They boil the coffee as it is being brewed and pass it through the grounds repeatedly.

### 7. Use clean equipment.

Urns and coffee makers must be cleaned every day. Coffee leaves oily deposits that quickly turn rancid or bitter and can ruin the next batch of coffee.

### 8. Use good filters.

Good filters are the only way to ensure sparkling, clear coffee. Most operations use paper filters, which are discarded after use. If cloth filters are used, they must be perfectly clean and free from odors.

### 9. Use proper holding procedures.

Proper holding temperature is 185° to 190°F (85° to 88°C). Higher temperatures decompose the coffee quickly. Lower temperatures mean the customer gets cold coffee.

Coffee made in carafe-type coffee makers is usually kept warm over electric burners.

Do not hold brewed coffee over heat longer than 30 minutes. After this time, loss of quality is considerable. If it must be held longer, transfer it as soon as it is brewed to preheated Thermos containers. Plan production so coffee is always fresh. Discard old coffee.



Decanter-type automatic drip coffee maker  
Courtesy of Cecilware.



## Procedure for Making Coffee in an Urn

1. Be familiar with your equipment. Models differ in details.
2. Check to make sure the urn holds sufficient fresh water at the proper temperatures for brewing.
3. Fit the filter securely in place.
4. Spread a measured amount of coffee evenly in the filter. An even bed is necessary for uniform extraction.
5. Pass the correct amount of water through the ground coffee. If the urn is manual, pour the water slowly in a circular motion. If it is automatic, all you need to do is make sure the nozzle is in place.
6. Keep the top covered during brewing to retain heat.
7. Remove the filter with the used grounds as soon as brewing is complete. Leaving the grounds in the urn results in overextraction and bitterness.
8. Mix the coffee. Because the coffee at the bottom is stronger, you must draw out some of it—about 1 gallon (4 L) per pound (500 g) of coffee—and pour it back into the top of the urn.
9. Hold at 185° to 190°F (85° to 88°C) for up to 1 hour.
10. Clean the urn thoroughly after use.

Using special urn brushes, clean the inside of the urn as well as inside spigots and glass gauges. Rinse and fill with several gallons of fresh water if the urn is to stand for a time. Empty and rinse with hot water before next use.

Twice a week, clean thoroughly with urn cleaning compound, following manufacturer's instructions.



**Twin urn**  
Courtesy of Cecilware.



**An espresso maker**  
Courtesy of Cecilware.

removed. Most decaffeination processes use chemical solvents, although the Swiss water process uses water only. Decaffeinated coffee is often specially requested by some customers. In the past, most restaurants offered decaffeinated coffee only in the instant form. Now, however, nearly all restaurants serve freshly brewed decaffeinated coffee.

3. **Espresso** or **expresso** is a strong, dark coffee made from beans roasted until they are almost black and ground to a powder. Espresso is served in small cups as an after-dinner beverage. In addition, several popular coffee drinks are made with brewed espresso, as discussed in the next section.
4. **Iced coffee** is made from double-strength brewed coffee to compensate for dilution by melting ice.

## ESPRESSO DRINKS

Espresso and espresso drinks have grown in popularity in recent years, and specialty coffee shops have sprung up seemingly on almost every street corner.

Espresso is a concentrated coffee beverage brewed in special machines (see photo) from dark-roast, finely ground beans. For each drink, the ground coffee is packed into a small metal filter, which is then firmly attached to the machine. Water is forced through the grounds under high steam pressure, making a small cup of strong beverage topped with a layer of rich foam called the *crema*. A shot of espresso is about 2 fluid ounces (55 mL), and it is usually served in a tiny cup or as a double shot in a standard coffee cup.

In addition, the following drinks are made with brewed espresso:

**Cappuccino** (cap oo chee no): equal parts espresso and frothy steamed milk.

**Latte** (lah tay): short for *caffè latte*, or “coffee milk.” One part espresso to two (or more) parts steamed milk, without the layer of foam found on cappuccino. The French **café au lait** (cah fay oh lay; meaning “coffee with milk”) is basically the same as a latte, but it may be made with strong regular dark roast coffee rather than espresso.

**Macchiato** (mah kee ah toe): espresso topped with a little frothed milk.

**Americano**: espresso diluted with hot water.

**Breve** (bray vay): espresso with steamed half-and-half.

**Mocha** (moh kah): espresso mixed with hot chocolate or cocoa, topped with whipped cream.

Specialty coffee shops also sell a great variety of flavored espresso coffee drinks, hot and cold, using flavored syrups such as caramel, vanilla, and mint.

## Tea

Tea is one of the world's most popular beverages, and it is widely drunk even in coffee-drinking countries. In many regions, tea is a much more popular beverage in the home than in the restaurant. Part of the difference may be due to mishandling in the restaurant and indifference on the part of restaurateurs.

Food-service professionals would do well to pay more attention to tea. First of all, it is much less expensive than coffee to serve. One pound (500 g) of tea yields 200 servings, as compared with 40 servings from 1 pound (500 g) of coffee. Moreover, tea is one of the simplest of beverages to serve and does not require the equipment or the labor of coffee service.

### Varieties

All the world's varieties of tea are produced from one species of evergreen shrub. Most of the differences among varieties are the results of growing conditions and modifications in processing techniques.

As in the case of coffee, different regions produce teas of different quality and flavor characteristics. Most of the tea consumed in North America is imported from India and Sri Lanka (Ceylon).

Variations in processing produce three categories of tea. *Black tea* is fermented by allowing the freshly harvested leaves to oxidize in a damp place. *Green tea* is dried without fermenting. *Oolong tea* is partially fermented to a greenish-brown color. Specialty teas and flavored teas are also available.

Black teas are graded by leaf size according to a rather complicated system. This is important to remember because most people think of orange pekoe as a variety of tea, whereas it is actually a specific leaf size of any black variety.

After grading, teas are blended to ensure consistency and uniformity. A blend may contain as many as 30 individual teas.

Many excellent blends are available from numerous purveyors. A smart food-service operator would do well to shop around rather than serve the same mediocre blend the competition serves.



Tea varieties, from left to right: black tea, green tea, oolong tea.

### HERBAL TEAS AND SPECIALTY TEA DRINKS

**Herbal teas** are beverages that are brewed like tea but that are made with herbs, spices, dried fruits, and other plant ingredients in place of tea leaves, or sometimes in addition to tea leaves. In other words, most herbal tea contains no actual tea. Hundreds of flavors and blends are available, far too many to list, and most purveyors have their own proprietary blends. Mint and chamomile are among the most popular herb teas.

**Chai** (rhymes with pie) is a spiced milk and tea blend that originated in India and has become popular in the West. *Chai* is the word for “tea” in several languages. The mixed beverage called *chai* is made of black tea, milk, spices such as cardamom, cinnamon, ginger, and black peppercorns, and sugar or another sweetener. In the West, *chai* is generally made from commercial mixes.

## Packaging and Market Forms

Tea is packaged in bulk as loose tea and in tea bags of various sizes. Standard cup-size bags are packaged 200 to the pound (500 g), while the pot-size bag (that is, individual service pot) is packaged at 150 to 175 per pound (500 g). This is important for you to know if you are purchasing tea because the larger bags will not be as economical if the service in your establishment is by the cup.

Larger tea bags that contain 1 or 2 oz (30 to 60 g) of tea are available for brewing larger quantities, especially for iced tea.

Instant tea is a soluble extraction made by brewing a very strong tea, using lesser grades, and drying the liquid to obtain a powder. This product is used primarily for iced tea because the processing results in the loss of much of the flavor and aroma essential to a good hot tea.

## Preparing Tea

In most restaurants, it seems, when one orders tea, one receives a cold cup, a tea bag in a little package, and a pot of warm water that has been standing in an urn for hours. This is absolutely the worst possible way to serve tea, with the possible exception of brewing a large quantity and keeping it warm all day. No wonder most people don't order tea.

Here is the right way:

### Procedure for Making Hot Tea

1. Use proper proportions of tea and water. One teaspoon (5 mL) loose tea or one single-service tea bag makes a 6-oz (175-mL) cup.
2. Rinse the teapot with hot water to warm it. Use china, glass, or stainless steel. Other metals may give an off flavor.
3. Bring fresh, cold water to a boil. Water that has been kept warm for a time makes flat-tasting tea.
4. Place the loose tea or tea bag in the pot and pour the water directly over it.
5. Let the tea steep 3 to 5 minutes. Then remove the tea bag or strain off the tea from the loose leaves.  
Establishments specializing in tea service present the customer with the pot of tea and a pot of hot water so they can dilute the tea to taste.
6. Serve immediately. Tea does not hold well.

### Procedure for Making Iced Tea

The following method makes 1 gallon (4 L). The tea is brewed stronger to allow for melting ice.

1. Place 2 ounces (60 g) tea in a pot.
2. Bring 1 quart (1 L) water to a boil and pour over the tea.
3. Steep 5 minutes. Remove tea bags, or strain out loose leaves.
4. Add 3 quarts (3 L) cold tap water.
5. Hold at room temperature up to 4 hours. Refrigeration may make the tea cloudy.
6. Serve over ice.

### KEY POINTS TO REVIEW

- What nine guidelines should be observed when making coffee?
- What is the procedure for making coffee in an urn?
- What is espresso? What popular drinks are made from espresso?
- What is the procedure for making hot tea? Iced tea?

**TERMS FOR REVIEW**

pasteurized	half-and-half	clarified butter	iced coffee
ultra-pasteurized	sour cream	margarine	cappuccino
Ultra-High-Temperature (UHT) pasteurization	crème fraîche	ripening	latte
whole milk	buttermilk	double-crème cheese	café au lait
milk fat	yogurt	triple-crème cheese	macchiato
butterfat	evaporated milk	chèvre	Americano
skim (nonfat) milk	condensed milk	process cheese	breve
low-fat milk	dried whole milk	specialty cheese	mocha
flavored milk	nonfat dry milk	artisan(al) cheese	herbal tea
homogenized milk	curdling	farmstead cheese	chai
whipping cream	scorching	instant coffee	
light cream	butter	decaffeinated coffee	
	unsalted butter	espresso/expresso	

**QUESTIONS FOR DISCUSSION**

1. What is curdling, and how can you prevent it when cooking with milk?
2. What is washed-rind cheese? Describe the typical appearance of washed-rind cheese, and compare it to mold-rind cheese.
3. Why does cheese combine more smoothly with a sauce at low heat than at high heat?
4. Why is using the proper grind important in making coffee?
5. Describe the procedure for making coffee in an urn.
6. Describe the proper method for making tea.