

long enough to minimize the raw flour taste. Blond roux is cooked longer, until the paste begins to change to a slightly darker color. Brown roux requires a much longer cooking time to develop its characteristic color and aroma. A good roux will be stiff, not runny or pourable.

INCORPORATING ROUX INTO A LIQUID

There are two ways to incorporate roux into a liquid without causing lumps:

- ❶ Cold stock can be added to the hot roux while stirring vigorously with a whisk.
- ❷ Room-temperature roux can be added to a hot stock while stirring vigorously with a whisk.

When the roux and the liquid are completely incorporated and the sauce begins to boil, it is necessary to cook the sauce for a time to remove any raw flour taste that may remain. Most chefs feel a minimum of 20 minutes is necessary.

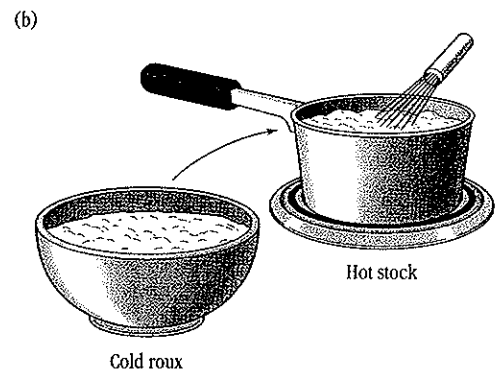
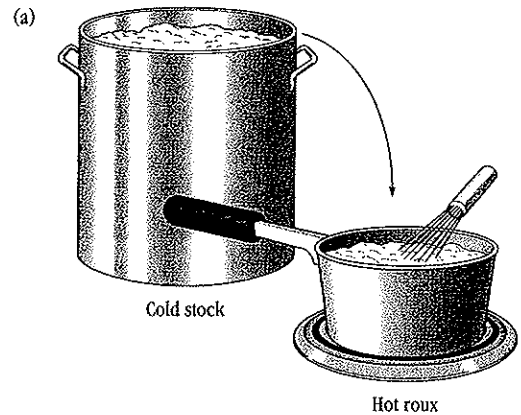
GUIDELINES FOR USING ROUX

- ❶ Avoid using aluminum pots. The scraping action of the whisk will turn light sauces gray and will impart a metallic flavor.
- ❷ Use sufficiently heavy pots to prevent sauces from scorching or burning during extended cooking times.
- ❸ Avoid extreme temperatures. Roux should be no colder than room temperature so that the fat is not fully solidified. Extremely hot roux is dangerous and can spatter when combined with a liquid. Stocks should not be ice cold when combined with roux; the roux will become very cold, and the solidified pieces may be very difficult to work out with a whisk.
- ❹ Avoid overthickening. See Table 10.2. Roux does not begin to thicken a sauce until the sauce is almost at the boiling point; the thickening action continues for several minutes while the sauce simmers. If a sauce is to cook for a long time, it will also be thickened by reduction.

CORNSTARCH

Cornstarch, a very fine white powder, is a pure starch derived from corn. It is used widely as a thickening agent for hot and cold sauces and is especially popular in Asian cuisines for thickening sauces and soups. Liquids thickened with cornstarch have a glossy sheen that may or may not be desirable.

One unit of cornstarch thickens about twice as much liquid as an equal unit of flour. Sauces thickened with cornstarch are less stable than those thickened with roux because cornstarch can break down and lose its thickening power after prolonged heating. Products thickened with cornstarch should not be reheated.



When thickening stock with roux, either (a) add cold stock to hot roux or (b) add cold roux to hot stock.

TABLE 10.2 PROPORTIONS OF ROUX TO LIQUID

FLOUR	+	BUTTER	=	ROUX	+	LIQUID	=	SAUCE
6 oz./180 g	+	6 oz./180 g	=	12 oz./360 g	+	1 gal./4 lt	=	light
8 oz./240 g	+	8 oz./240 g	=	1 lb./480 g	+	1 gal./4 lt	=	medium
12 oz./360 g	+	12 oz./360 g	=	24 oz./720 g	+	1 gal./4 lt	=	heavy

Variables: The starch content of a flour determines its thickening power. Cake flour, being lowest in protein and highest in starch, has more thickening power than bread flour, which is high in protein and low in starch. In addition, a dark roux has less thickening power than a lighter one, so more will be needed to thicken an equal amount of liquid.



- 1 Trim off the wing tips and the ends of the leg bone.



- 2 Make a slit in the skin below the leg and tuck the leg bone into the slit.

PROCEDURE FOR CUTTING A BIRD INTO PIECES

This is one of the most common butchering procedures. It is also very simple once you understand the bird's structure and are able to find each of its joints.



- 1 Remove the leg by pulling the leg and thigh away from the breast and cutting through the skin and flesh toward the thigh joint.



- 2 Cut down to the thigh joint, twist the leg to break the joint and cut the thigh and leg from the carcass. Be careful to trim around the oyster meat (the tender morsel of meat located next to the backbone); leave it attached to the thigh. Repeat with the other leg.



- 3 To split the breast, follow Steps 2 through 6 for cutting a bird in half. Cut the breast into two halves.



- 4 The bird is now cut into four quarters.



- 5 To cut the bird into six pieces, separate the thigh from the leg by making a cut guided by the line of fat on the inside of the thigh and leg.



- 6 To cut the bird into eight pieces, separate the wing from the breast by cutting the joint, or split the breast, leaving a portion of the breast meat attached to the wing.

SEASONINGS

Principal stock seasonings are peppercorns, bay leaves, thyme, parsley stems and, optionally, garlic. These seasonings generally can be left whole. A stock is cooked long enough for all of their flavors to be extracted, so there is no reason to chop or grind them. Seasonings generally are added to the stock at the start of cooking. Some chefs do not add seasonings to beef or veal stock until midway through the cooking process, however, because of the extended cooking times. Seasonings can be added as a sachet d'épices or a bouquet garni.

Salt, an otherwise important seasoning, is not added to stock. Because a stock has a variety of uses, it is impossible for the chef to know how much salt to add when preparing it. If, for example, the stock was seasoned to taste with salt, the chef could not reduce it later; salt is not lost through reduction, and the concentrated product would taste too salty. Similarly, seasoning the stock to taste with salt could prevent the chef from adding other ingredients that are high in salt when finishing a recipe. Unlike many seasonings whose flavors must be incorporated into a product through lengthy cooking periods, salt can be added at any time during the cooking process with the same effect.

Principles of Stock Making

The following principles, outlined in Figure 10.1, apply to all stocks. You should follow them in order to achieve the highest-quality stocks possible. Consult Table 10.1 when problems arise.

Start the stock in cold water.
Simmer the stock gently.
Skim the stock frequently.
Strain the stock carefully.
Cool the stock quickly.
Store the stock properly.
Degrease the stock.

FIGURE 10.1 ► Principles of stock making.

A. START THE STOCK IN COLD WATER

The ingredients should always be covered with cold water. When bones are covered with cold water, blood and other impurities dissolve. As the water heats, the impurities coagulate and rise to the surface, where they can be removed easily by skimming. If the bones were covered with hot water, the impurities would coagulate more quickly and remain dispersed in the stock without rising to the top, making the stock cloudy.

If the water level falls below the bones during cooking, add water to cover them. Flavor cannot be extracted from bones not under water, and bones exposed to the air will darken and discolor a white stock.

B. SIMMER THE STOCK GENTLY

The stock should be brought to a boil and then reduced to a simmer, a temperature of approximately 185°F (85°C). While simmering, the ingredients release their flavors into the liquid. If kept at a simmer, the liquid will remain clear as it reduces and the stock develops.

Never boil a stock for any length of time. Rapid boiling of a stock, even for a few minutes, causes impurities and fats to blend with the liquid, making it cloudy.

C. SKIM THE STOCK FREQUENTLY

A stock should be skimmed often to remove the fat and impurities that rise to the surface during cooking. If they are not removed, they may make the stock cloudy.

D. STRAIN THE STOCK CAREFULLY

Once a stock finishes cooking, the liquid must be separated from the bones, vegetables and other solid ingredients. In order to keep the liquid clear, it is important not to disturb the solid ingredients when removing the liquid. This is easily accomplished if the stock is cooked in a steam kettle or stockpot with a spigot at the bottom.

If the stock is cooked in a standard stockpot, to strain it:

- ❶ Skim as much fat and as many impurities from the surface as possible before removing the stockpot from the heat.
- ❷ After removing the pot from the heat, carefully ladle the stock from the pot without stirring it.
- ❸ Strain the stock through a china cap lined with several layers of cheesecloth.

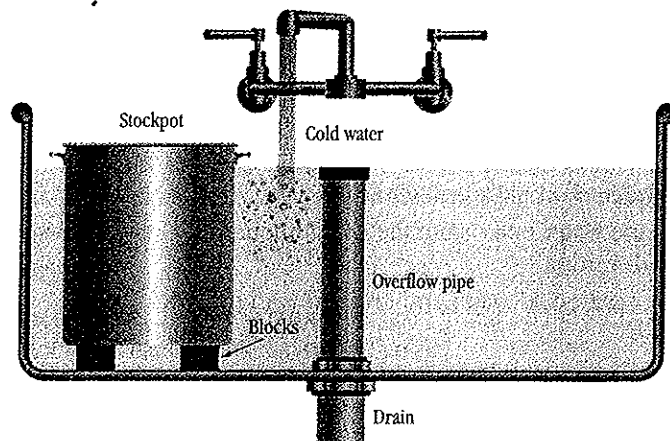


FIGURE 10.2 ► Venting a stockpot.

E. COOL THE STOCK QUICKLY

Most stocks are prepared in large quantities, cooled and held for later use. Great care must be taken when cooling a stock to prevent food-borne illnesses or souring. To cool a stock below the temperature danger zone quickly and safely:

- ❶ Keep the stock in a metal container. A plastic container insulates the stock and delays cooling.
- ❷ Vent the stockpot in an empty sink by placing it on blocks or a rack. This allows water to circulate on all sides and below the pot when the sink is filled with water. See Figure 10.2.
- ❸ Install an overflow pipe in the drain and fill the sink with cold water or a combination of cold water and ice. Make sure that the weight of the stockpot is adequate to keep it from tipping over.
- ❹ Let cold water run into the sink and drain out the overflow pipe. Stir the stock frequently to facilitate even, quick cooling.

In addition to this venting procedure, cooling wands can be used to speed the cooling of stocks, soups, sauces and other liquids. These wands (also known as ice paddles) are hollow plastic containers that can be filled with water or ice, sealed, frozen and then used to stir and cool liquids. Clean and sanitize the wand after each use to prevent cross-contamination.

F. STORE THE STOCK PROPERLY

Once the stock is cooled, transfer it to a sanitized covered container (either plastic or metal) and store it in the refrigerator. As the stock chills, fat rises to its surface and solidifies. If left intact, this layer of fat helps preserve the stock. Stocks can be stored for up to 1 week under refrigeration or frozen for several months.

G. DEGREASE THE STOCK

Degreasing a stock is simple: When a stock is refrigerated, fat rises to its surface, hardens and is easily lifted or scraped away before the stock is reheated.

White Stock

White or neutral stock may be made from beef, veal or chicken bones. The finished stock should have a good flavor, good clarity, high gelatin content and little or no color. Veal bones are most often used, but any combination of beef, veal or chicken bones may be used.

BLANCHING BONES

Chefs disagree on whether the bones for a white stock should be blanched to remove impurities. Some chefs argue that blanching keeps the stock as clear and colorless as possible; others argue that blanching removes nutrients and flavor.

SAFETY ALERT

Cooling and Handling Stocks

A two-stage cooling method is recommended for keeping stock out of the temperature danger zone. First cool the stock to 70°F (21°C) within 2 hours and from 70°F to below 41°F (21°F to below 5°C) in an additional 4 hours, for a total of 6 hours. To prevent bacterial growth if these temperatures have not been met, the stock must be reheated to 165°F (74°C) for 15 seconds within 2 hours.



Lifting fat from the surface of a cold stock.

degrease to remove fat from the surface of a liquid such as a stock or sauce by skimming, scraping or lifting congealed fat