



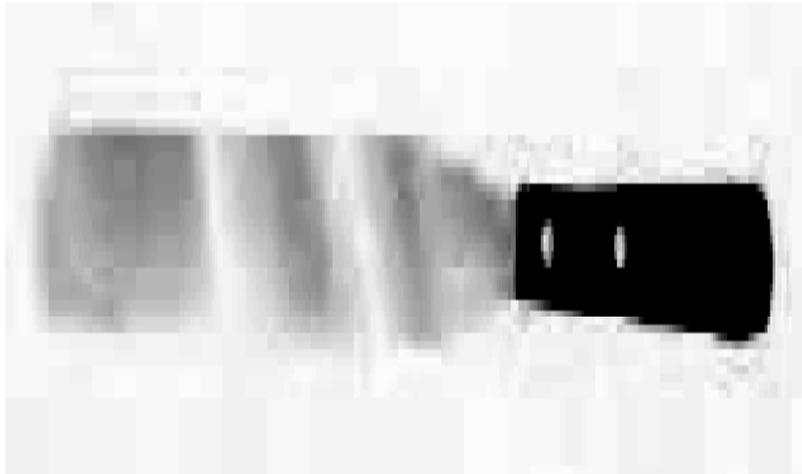
Chapter - XI

Preparation of Eggs' Products

COMPOSITION

An egg consists of a yolk, a white, and a shell. It also contains a membrane that lines the shell and forms an air cell at the large end, and two white strands called chalazae that hold the yolk in center.

1. The **yolk** is high in both fat and protein, and it contains iron and several vitamins.
2. The **white** is albumin protein, which is clear and soluble when raw but white and firm when coagulated.
3. The **shell** is the outermost covering. It is fragile and porous, allowing odors and flavors to be absorbed by the egg and allowing the egg to lose moisture if unbroken.



GENERAL COOKING PRINCIPLES

The most important rule of egg cookery is: Avoid high temperatures and long cooking times. In other words, do not overcook. Overcooking produces tough eggs, causes discoloration, and affects flavor.



Coagulation

Eggs coagulate at the following temperatures:

Whole eggs, beaten about 69°C

Whites 60° to 65°C

Yolks 62° to 70°C

Custard (whole eggs plus liquid) 79° to 85°C

As the temperature of coagulation is reached, the eggs change from semiliquid to solid, and they become opaque. If their temperature continues to rise, they become even firmer. An overcooked egg is tough and rubbery. Low temperatures produce the best-cooked eggs.

Black-green ring formation:

The familiar blackish green ring you often see in hard-cooked eggs is caused by cooking at high temperatures or cooking too long. This ring results when the sulfur in the egg whites reacts with the iron in the yolk to form iron sulfide, a compound that has a green color and a strong odor and flavor. The best way to avoid green eggs is to use low temperatures and short cooking and holding times.

COOKING OF EGG

Boiling

Eggs should be simmered in water to the soft, medium, or hard-cooked stage according to the following methods.

Method

- Place eggs in saucepan and cover with cold water.
- Bring water to a boil.
- Reduce heat and simmer for the required time:

Soft-cooked 1 minute

Medium-cooked 3 to 5 minutes

Hard-cooked 9 to 10 minutes



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- **Drain immediately and cool under cold running water to stop the cooking. Cool just a few seconds if eggs are to be served hot. Cool further if they are to be held for later use.**
 - **To peel, crack the shell and pull it away, starting at the large end (where the air sac is located). For easier peeling, peel while still warm, and hold under running water to help loosen shell. Very fresh eggs are hard to peel.**

Poaching

The principles of cooking eggs in the shell are applicable to poached eggs. The only difference between the two items is the shell. This difference, of course, complicates the cooking process, as emphasized in the following procedure. The object is to keep the eggs egg-shaped—that is, in a round, compact mass rather than spread all over the pan.

Method:

- **Take fresh water in a pan, add 1 teaspoon salt and 2 teaspoons distilled vinegar per quart of water (5 mL salt and 10 mL vinegar per liter). The vinegar helps coagulate the egg white faster so it keeps a better shape.**
- **Bring water to a simmer. If water is boiling, eggs will toughen and may be broken up by the agitation. If water is not hot enough, eggs will not cook quickly enough and will spread.**
- **Break eggs, one at a time, into a dish or a small plate and slide into the simmering water.**
- **Simmer 3 to 5 minutes, until whites are coagulated but yolks are still soft.**
- **Remove eggs from pan with perforated spoon.**
- **Drain very well, serve immediately.**

Frying

Fried eggs are an especially popular breakfast preparation. They should always be cooked to order and served immediately.





Method:

- Take a sauté pan, add fat and set it over moderate heat.
- Break the eggs into a dish.
- When the fat is hot enough, slide the eggs into the pan.
- If the fat is not hot enough, the eggs will spread too much and may stick. If it is too hot, the eggs will become tough or even crisp.
- Reduce heat to low and cook the eggs to order.
- Sunny side up: Cook slowly without flipping until white is completely set but yolk is still soft and yellow. Heat must be low, or bottom will toughen or burn before top is completely set.
- Basted: Do not flip. Add a few drops of water to pan and cover so steam cooks the top. A thin film of coagulated white will cover the yolk, which should remain liquid. Note: This preparation is sometimes called country style. The term basted is used because the same effect may be achieved by spooning hot fat over the egg as it fries. This method may make the eggs excessively greasy, however.
- Over easy: Fry and flip over. Cook just until the white is just set but the yolk is still liquid.
- Over medium: Fry and flip over. Cook until the yolk is partially set.
- Over hard: Fry and flip over. Cook until the yolk is completely set.

Scrambled Eggs

Like other egg preparations, scrambled eggs are best if cooked to order. However, they may be made in larger quantities. They should be undercooked if they are to be held for volume service, as they will cook more in the steam table.

Do not overcook scrambled eggs or hold them too long. Overcooked eggs are tough and watery, and they eventually turn green in the steam table. Scrambled eggs should be soft and moist.





Method:

- Break eggs into a bowl and beat until well blended. Season with salt and white pepper.
- If desired, add a small amount of milk or cream.
- Heat butter in a small sauté pan.
- When fat is just hot, pour in eggs.
- Cook over low heat, stirring gently from time to time as the eggs coagulate. Lift portions of coagulated egg so uncooked egg can run underneath.
- Too much stirring breaks up eggs into very small particles. Do not let the eggs brown. Keep heat low.
- When eggs are set but still soft and moist, remove from heat.

Omelets

Omelet is the most common egg preparation. It is similar to the shape of a pan cake. There are many varieties and methods of preparation of omelet, but the most famous one is French omelet or Plain omelet.

Plain Omelet

Omelets may be described as sophisticated scrambled eggs. The first part of the technique is similar to that for making scrambled eggs. But the similarities end there, and the omelet emerges from the pan not as a shapeless pile of curds but an attractive oval with a light, delicate texture.

Method:

- Beat 2 or 3 eggs in a small bowl just until well mixed. Do not whip until frothy. Season with salt and pepper.
- Place an omelet pan over high heat.
- When the pan is hot, add about 1 tablespoon (15 mL) clarified butter and swirl it around to coat the inside of the pan.





- Add the eggs to the pan. They should begin to coagulate around the edges and on the bottom in a few seconds.
- Tilt the handle up and shake the pan so the omelet slides to the opposite side of the pan and begins to climb up the opposite slope.
- With the fork, fold the sides of the omelet over the center. The omelet should now be resting in the corner of the pan and have an approximately oval shape.
- Grasp the handle of the pan with your palm underneath and tilt the omelet out onto a plate so it inverts and keeps an oval shape.

