



Safe Preparation of Eggs and Egg Products

The inside and outside of an egg may be contaminated with pathogenic bacteria, such as *Salmonella* spp., but the appearance of contaminated eggs looks normal. In this respect, the food industry should observe good food hygiene and safety practices in the preparation of eggs and egg products to prevent foodborne diseases.



Hygiene practices for safe preparation of eggs and egg products

1. Buy safe raw materials

- Never buy eggs and egg products from unknown sources, and those of which have not been subject to mandatory inspection;
- Choose clean eggs with intact eggshells and no cracks on them;
- Use other dipping sauces containing eggs, like commercial prepared mayonnaise, to substitute sauces made with raw eggs;
- Use pasteurised eggs, liquid eggs and powdered eggs for preparation of food items containing raw or half-cooked eggs (e.g. scrambled eggs and mousse cake).

2. Storage and handling

- Store eggs and egg products at appropriate temperature specified in the instructions on the product packaging;
- It is not necessary to wash eggs before storing them in a refrigerator. But if the eggshell is soiled, wipe it with a dry cloth or paper towel before refrigeration. Once the egg is washed, use it immediately;
- Keep eggs in a storage box and separate them from ready-to-eat food;
- Follow the "First-in, First-out" rule, and do not use eggs and egg products beyond their expiry dates.

3. Preparation

- Use separate utensils for handling raw food (including eggs) and ready-to-eat food;
- Use an egg separator to separate the yolk from the egg white instead of using the eggshell;
- Only prepare liquid eggs right before cooking. Pay attention to the following in the making of **pre-prepared liquid eggs***:
 - ① Plan the amount of liquid eggs needed and time taken for the preparation;
 - ② After breaking an egg, make sure the egg content does not spoil before mixing with other eggs. Subsequently, place the mixture in a covered container and store it in a refrigerator;
 - ③ Use the ready-to-use liquid egg as soon as possible, and do not add new liquid egg to the already refrigerated one;
 - ④ Discard any unused pre-made liquid egg mixture on the same day.



4. Cook thoroughly and store at a safe temperature range

- Thoroughly cook eggs and egg-containing food until both the egg white and yolk turn completely solid;
- If it is not intended for immediate consumption, keep hot egg-containing food (e.g. scrambled eggs) above 60°C, and cold food (e.g., sandwiches) at 5°C or below;
- Shorten the time the food left in the danger temperature zone (between 5°C and 60°C) during food preparation, and follow the “2-hour/4-hour rule” :
 - ✓ Food left in the danger temperature zone for less than 2 hours should be stored in the refrigerator or used right away;
 - ✓ Food left in the danger temperature zone for 2 to 4 hours should be used right away;
 - ✓ Food left in the danger temperature zone for longer than 4 hours should be discarded.

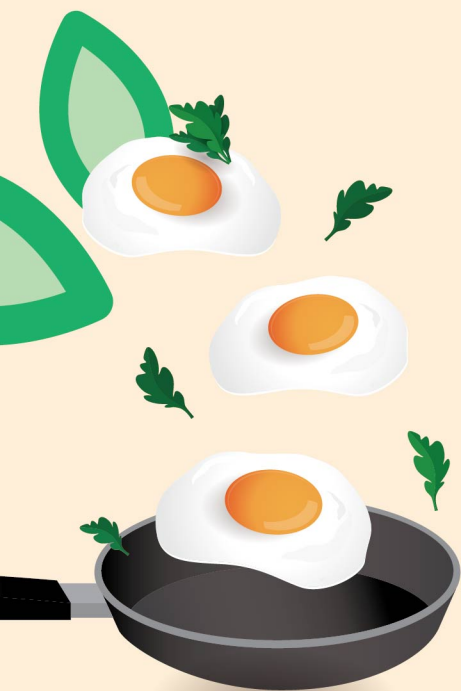
5. Hygiene conditions of individuals, utensils, equipment and environment

- Wash hands thoroughly before and after handling eggs;
- Thoroughly clean and disinfect all utensils, equipment and food contact surfaces that have been in contact with eggs.



*Notes on using pre-made liquid egg mixture

Pre-made liquid egg mixture refers to the mixture of eggs prepared by breaking a number of eggs into a container and combining them for use in multiple egg dishes. But, this mixture is susceptible to microbial contamination. It must be thoroughly cooked and not prepared for food items containing raw or half-boiled eggs.



Advice to individuals in high-risk groups

- High-risk individuals, such as pregnant women, the elderly and people with weakened immune systems, should avoid eating raw or undercooked eggs and egg products;
- When high-risk individuals order their food, the restaurant staff can advise them on their food choice or serve them thoroughly cooked food as an option;
- For instance, when an elderly customer orders a beef congee with raw egg, the restaurant staff can suggest to the customer that the raw egg can be replaced with thoroughly cooked egg or other cooked ingredients.

Learn about “Pasteurised Eggs”

It refers to eggs which have been pasteurised. Pasteurisation is a heat-treatment process applied to food at a specific temperature for a set period of time to destroy pathogens in food and extend their shelf life. It can significantly reduce the food safety risks associated with dishes prepared with raw eggs and egg products. The pasteurised eggs and egg products currently selling on the local market include shell eggs, liquid egg yolks, liquid egg whites and liquid eggs.



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