

Food Safety Guideline on Preparation of Sushi, Sashimi, Raw Oyster and Meat To Be Eaten Raw



Food eaten raw is very popular in Hong Kong. Common examples are raw oysters, sashimi, salmon and sushi with raw ingredients (such as fish and shell fish).

Since food eaten raw is not thoroughly cooked, bacteria will multiply if not properly handled and stored. Special care should be taken in the whole course of food preparation. Besides, cleanliness of utensils and personal hygiene are essential in ensuring food safety and food hygiene. Therefore, members of the food trade should observe the following steps:

Purchase

- Buy raw materials from reliable and hygienic suppliers. The production of seafood in some countries is in accordance with Hazard Analysis and Critical Control Point (HACCP) criteria, which helps to ensure food safety.
- Raw materials should be fresh, wholesome and of good quality. Quality check should be conducted at the time of receiving, e.g. frozen raw materials are still in a frozen state.
- Parasites in fish can be killed by freezing the fish at -20°C or below for seven days or at -35°C for about 20 hours. Depending on the types of parasites being targeted, different freezing temperature and time combination may be adopted. Food businesses should refer to the control measures for parasites in fish and fishery products as specified in relevant codes or regulations, such as Codex Code of Practice For Fish and Fishery Products and Regulation (EC) No.853/2004, etc.
- Imported raw oyster, meat to be eaten raw and raw materials for the preparation of sushi/ sashimi should be accompanied with valid and recognised official health certificates.
- Do not buy food and ingredients beyond its expiry date.

Transportation

- Store raw materials and food eaten raw in an independent, clean and hygienic environment during transportation to avoid cross-contamination. Keep chilled food at a temperature between 0°C and 4°C and frozen food at -18°C or below.

Storage

- Store the food eaten raw in designated refrigerators or separate compartments of the refrigerator to avoid cross-contamination. Keep chilled food at a temperature between 0°C and 4°C and frozen food at -18°C or below.
- The temperature of freezer and fridge should be closely monitored and temperature log record should be maintained.
- Raw ingredients and food eaten raw should be stored separately to prevent cross-contamination.
- Label the storage time of the food and check it regularly.
- Adopt “first-in-first-out” principle for storage.
- Keep separate stock record for the food eaten raw and its raw materials to monitor their rotation.
- Avoid overstocking of food and its ingredients.
- Do not overstuff the refrigerator.



Prepare

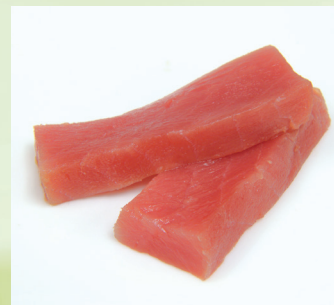
- Designate a separate area in a food room and use designated knives and chopping boards for handling the food eaten raw.
- Defrost frozen raw materials in refrigerators kept at a temperature between 0°C and 4°C and maintain it at this temperature before handling. Defrosted food should be handled and served to customers for consumption as soon as possible. Avoid re-freezing and re-defrosting.
- Food eaten raw such as marine products should be washed in designated sink thoroughly to prevent cross-contamination.

Cooling and holding (for sushi rice)

- Cool cooked rice from 60°C to 20°C as quickly as possible (within 2 hours); and from 20°C to 4°C, within 4 hours or less.
- Speed up the cooling process by using wide, shallow containers or reducing the size of the portions.
- Adopt appropriate measures to ensure “first-in-first-out” of cooked rice e.g. use date and time coding to show the storage time.
- Rice should be properly acidified to a pH of 4.6 or below. Acidification of rice should occur as soon as it is cooked.
- Trade is recommended to check the pH of acidified rice regularly, especially when there is new staff or new recipe.

Display and Sale

- Food eaten raw inside display refrigerator should be properly wrapped up by clean, non-toxic materials or stored in covered containers and should bear a food label with expiry date.
- The temperature of display refrigerator should be closely monitored and temperature log record should be maintained.
- Cold food should be put in shallow utensils in a container with ice-cubes to keep the food in a chill state when serving to customers.
- Cold food in self-service counter should be put in shallow utensils in a container with ice-cubes to keep the food in a chill state. After thawing out of the ice, new ice-cubes should be refilled with water discarded.
- Food in self-serve conveyor belt or self-service counter should be properly covered.
- Provide sufficient number of tongs with long handle at self-serve counter for customers. Replace the tongs regularly. Remove contaminated tongs from the counter immediately.
- Supervise the self-serve counter area by appropriately trained staff to protect the food against contamination.
- Ideally, prepared sushi should be kept at temperature at 4°C or below. However, if sushi is to be displayed at temperature higher than 4°C, a documented time control system should be in place to ensure that sushi is not displayed for prolonged periods of time. As a general rule, if properly handled sushi with rice acidified to pH 4.6 or below have been displayed at temperature higher than 4°C:-
 - for less than 2 hours, they can be refrigerated for final use later or used before the 4 hours limit is up.
 - for more than 2 hours but less than 4 hours, they should be used before the 4 hours limit is up but should not be returned to the refrigerator.
 - for more than 4 hours, they should be discarded.
- Sushi should be kept refrigerated unless it is being displayed and appropriate measures should be



adopted to ensure “first-in-first-serve” of prepared sushi e.g. use date and time coding to show the storage time.

- Keep displayed sushi out of direct sunlight which may increase the storage temperature.
- Keep displayed sashimi, except for live bivalve molluscs intended for raw consumption, at temperature at 4°C or below.
- Live bivalve molluscs intended for raw consumption should not be subjected to extreme temperatures. In most cases, storage above 10°C (including at room temperature) or below 2°C should be avoided.

Cleanliness of Utensils

- Utensils should be thoroughly cleansed and sterilized by using a bactericidal agent approved by the Director of Food and Environmental Hygiene before and after use. Use clean and sterilized towel for wiping utensils.
- All knives used for the preparation of sushi/sashimi and meat to be eaten raw shall be placed or stored under cover in the knife sterilization apparatus and immersed in the sterilization solution in the sterilizer when they are not in use.
- The sterilization apparatus for the knife for preparation of sushi/ sashimi and meat to be eaten raw shall be cleansed and the sterilization solution shall be renewed at least once daily.

Personal Hygiene

- All food handlers shall wear clean protective clothing and head coverings during food handling. If clothes become soiled during food preparation, change or clean them as necessary.
- Food handlers are advised to wear masks and gloves during food handling. Discard the masks and gloves when damaged, soiled or after prolonged use.
- Keep hands clean. Wash hands with running water and soap thoroughly for 20 seconds before handling food, after handling raw meat, poultry, raw seafoods, dirty equipment, utensils and refuse.
- Do not handle food in case of sore throat or gastro-intestinal symptoms like diarrhoea and vomiting.
- Cover sore or cut on hands by coloured waterproof bandages.

Hazard Analysis and Critical Control Point

Hazard Analysis and Critical Control Point (HACCP) is a food safety management system. It adopts a proactive approach to anticipate the occurrence of potential problems during food production process and to implement measures designed to prevent the occurrence of these problems. HACCP system has been adopted worldwide by many food trades.

The 7 Principles in Hazard Analysis and Critical Control Point

1. Analyse Hazard

A hazard is an agent that may cause food to be unsafe for human consumption. The trade may use flow diagram to identify all significant hazards associated with each step. Below are examples of hazard:-

- Food is contaminated by harmful micro-organisms (e.g. raw oysters contaminated with *Norovirus*)
- Harmful micro-organisms grow during processing (e.g. *Staphylococcus aureus* grows and multiplies in sushi)



- Cooking cannot completely destroy the micro-organisms (e.g. spores of *Bacillus cereus* in sushi rice are not destroyed upon normal cooking)

2. Determine Critical Control Points (CCPs)

Determine the critical control points at which hazards can be controlled or eliminated (e.g. storage of sashimi).

3. Establish limits for CCPs

List the control limits that can be used to address the identified CCPs. Examples of control limits:

CCPs	Control limits
Storage of sashimi	Chilled food should be stored at a temperature between 0°C and 4°C. Frozen food should be stored at -18°C or below.
Thawing of frozen food	Frozen foods should be thawed at a temperature between 0°C and 4°C.

4. Establish monitoring procedures for CCPs

The purpose of monitoring procedures is to ensure that the control measure meets the limits set for CCPs, e.g. the temperature limit, or cooking or cooling time limit. Major monitoring procedures include visual inspections and physical measurements such as temperature reading. Besides, the frequency and time of the monitoring should be specified.

5. Establish corrective actions

Establish corrective actions in advance for CCPs so as to correct deviations of the limits quickly and prevent supply of unsafe products, e.g.

- Adjust or repair the chiller if its temperature is higher than 4°C.

6. Establish verification procedures

Establish verification procedures to ensure that the HACCP system is functioning properly, e.g.

- Manager of the food and beverage department conducts regular checking on the temperature of freezers and chillers.
- Manager of the food and beverage department audits the monitoring records.

7. Establish a record system

A HACCP system should be supported by comprehensive, effective and accurate records for reference and review. They include records of food products safety (eg. health certificates and test reports), process steps, food storage, monitoring and corrective actions etc. Review these records can assist to identify areas for improvement. During food incidents, the record system assists in tracing the source of ingredients, production process and final products distribution and facilitates product recall.

It is advised to review the HACCP system when there is any change in production process or change of product. Besides, the system should be regularly reviewed to ensure that it operates properly.

Enquiry

For further information, please visit the website of the Centre for Food Safety at www.cfs.gov.hk