

Trade Guidelines on Safe Production of Non-prepackaged Beverages



This set of guidelines is intended for food businesses that prepare and sell non-prepackaged beverages at premises, including those takeaway shops. It aims to help food trade implement food safety measures in their operations in order to produce and sell wholesome and safe non-prepackaged beverages, especially the non-hot served ones.

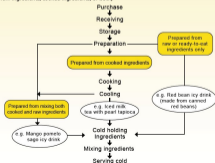
Introduction

In Hong Kong, consumers not only can savour a wide range of foods but enjoy different types of beverages. In recent years, some non-prepackaged beverages that are mixed or topped with different solid ingredients, such as pearl tapioca, jelly, aloe vera, fruit and red beans, have become more and more popular. These drinks, including those known as "Taiwanese style beverages", are commonly available at takeaway beverage shops as well as general and fast food restaurants. Non-prepackaged beverages can be served hot or cold and are generally prepared for immediate consumption. Although they are termed as non-prepackaged beverages, they are generally covered with a lid or heat seal plastic film upon serving. Due to the complex ingredients used and possible involvement of manual handling, these drinks, especially the non-hot served ones, may have higher microbiological risks.

Ingredients added to the non-prepackaged beverages may be prepared in advance and involve manual handling process like other ready-to-eat food. Unhygienic handling of these ingredients may result in contamination by dangerous microorganisms (e.g. *Staphylococcus aureus*, which may be present on human skin). If the ingredients are not stored properly, pathogens resulted from contamination may multiply and lead to foodborne disease. In addition, some non-prepackaged beverages may be added with raw ingredients like fresh fruit or its juice, which are prone to contamination from environment and upon manual handling like cutting and peeling.

In order to ensure food safety, it is important to implement food safety measures in the production of non-prepackaged beverages.

A generic flow diagram of non-prepackaged cold beverages production (beverages may be mixed with raw ingredients, cooked ingredients, or both)



Food Safety Measures for Preparing Non-prepackaged Beverages

In order to prepare safe and wholesome food, including non-prepackaged beverages, for consumers, it is essential to follow the **5 Keys to Food Safety** in the daily operation:

1. **Choose** (Choose safe raw materials)
2. **Clean** (Keep hands and utensils clean)
3. **Separate** (Separate raw and ready-to-eat food)
4. **Cook** (Cook thoroughly)
5. **Safe Temperature** (Keep food at safe temperature)

Below are some practical tips on how you can practise the **5 Keys to Food Safety** in the production of non-prepackaged beverages.

Purchase and Receiving

- Obtain drink mixes and other ingredients from approved and reliable sources.
- Use fresh and wholesome food ingredients and check the quality of the ingredients upon receipt, (e.g. ensure that there are no signs of contamination or damage on raw food and discard mouldy food).



Storage

- Store drink mixes and beverage ingredients preferably in containers with lids at safe temperatures (e.g. perishable items, including fresh ingredients, at 4°C or below, frozen items at -18°C or below).
- Ideally, use two refrigerators to store non-ready-to-eat food and ready-to-eat food separately.
- If non-ready-to-eat food and ready-to-eat food have to be stored in the same refrigerator, store food in containers with lids to avoid contact between non-ready-to-eat food and ready-to-eat food.
- Apply the first-in-first-out principle to store food. Do not use food beyond its expiry date or expected shelf life.

Preparation

- Food contact surfaces of equipment and utensils should be maintained in a clean and sanitary condition.
- Use potable water for making ice.
- Use only boiled water and/or distilled water for diluting drink mixes/fruit juices in the preparation of the beverages.
- Estimate the demand of the food ingredients or drink mixes for preparing beverages carefully to avoid over-production.
- Plan the production schedule ahead to avoid preparing food ingredients or drink mixes for beverages too far in advance.
- Use separate utensils to handle non-ready-to-eat food and ready-to-eat food respectively.
- Try to use utensils, such as tongs, scoops, spoons, small cups, tissue paper or clean gloves when handling ready-to-eat food or ice.
- Wash fruit and vegetables thoroughly under running water, especially if they are to be eaten raw or with incomplete cooking.

Cooking (if applicable)

- Cook thoroughly, bring ingredients like red beans and pearl tapioca in water to boil and continue to boil for at least one minute.

Cooling (if applicable)

- Cool food and drinks 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.
- If necessary, use potable water/ice to cool ingredients.

Cold Holding

- Keep prepared ingredients or drink mixes in covered containers and away from non-ready-to-eat food, in the upper compartment if stored in the same refrigerator, at temperature of 4°C or below. Check the temperature regularly to ensure that the food is kept at designated temperature.
- As a general rule, after proper cooling, if prepared ingredients have been kept under room temperature:
 - for less than 2 hours, they can be refrigerated for final use later or used within 4 hours.
 - for between 2 hours and 4 hours, they should be used within 4 hours and should not be returned to the refrigerator.
 - for more than 4 hours, they should be discarded.
- Adopt appropriate measures to ensure ingredients, which are cooked or prepared in advance, comply with the first-in-first-out principle (e.g. use date and time coding to show the storage time).



Personal and Environmental Hygiene

- Always follow good personal hygiene practices, including:
 - Wash hands thoroughly with running water and soap for 20 seconds before handling foods, during food preparation and after going to the toilet;
 - Wear clean and light-coloured outer clothing or protective overalls;
 - Wear disposable gloves when handling ready-to-eat food;
 - Open wound should be covered by gloves or light-coloured waterproof bandages;
 - Suspend from engaging in any food handling work when suffering or suspected to be suffering from an infectious disease or symptoms of illness such as flu, diarrhoea, vomiting, fever, sore throat and abdominal pain.
- Ensure hygiene of equipment/utensil by:
 - Clean and sanitise all utensils and equipment, including tongs and packaging machines regularly, with suitable facilities and procedures;
 - Check, clean and change water filter regularly if used;
 - Keep all drinking straws (or tubes) in dust-proof containers.

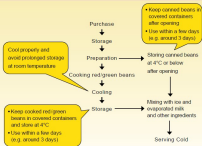
Tips for Safe Production of Non-prepackaged Beverages

A recent study conducted by the Centre for Food Safety shows that non-prepackaged beverages, especially those containing dairy ingredients or red/green beans available in the market, may have sub-optimal microbiological quality. Factors such as post-cooking contamination, prolonged storage at room temperature and unhygienic handling may affect the microbiological quality of food. To ensure food safety, special attention should be paid in producing these products and their ingredients as highlighted in the diagrams below.

A. Food safety tips for the production of red/green bean icy drink

In general, the red/green beans used in non-prepackaged beverages are cooked in advance and stored for future use. Some canned ready-to-eat beans are also available. Below are the measures which need special attention during production:

- Keep cooked red/green beans or canned beans after opening in covered containers and away from raw food.
- Store cooked red/green beans or canned beans after opening at temperature at 4°C or below and use within a few days (e.g. around 3 days, but shorter period if frequently left at room temperature during business hours).
- Evaporated milk can be stored at room temperature before opening and should be stored at 4°C or below after opening.
- Adopt appropriate measures to ensure ingredients, which are cooked or prepared in advance comply with first-in-first-out principle e.g. use date and time coding to show the storage time.
- Always follow good personal hygiene practices.



B. Food safety tips for the production of iced milk tea with pearl tapioca

In general, the milk tea used in non-prepackaged beverages is prepared in advance and stored under refrigeration. Milk powder (or non-dairy creamer) or liquid milk are added to the boiled tea and stored together. Cooked and subsequently cooled pearl tapioca are mixed with milk tea upon order. Below are the measures which need special attention during production:

- Estimate the demand of milk tea and pearl tapioca carefully to avoid over-production.
- Adopt appropriate measures to ensure ingredients, including milk tea and pearl tapioca, which are cooked or prepared in advance, comply with first-in-first-out principle e.g. use date and time coding to show the storage time.
- Check the expiry date of pre-packaged milk before use and avoid prolonged storage of milk after opening. Pasteurised milk should be stored at 4°C or below while Ultra-high temperature (UHT) treated milk can be stored at room temperature before opening and should be stored at 4°C or below after opening in accordance with the instruction on the package.
- Cool/rinse pearl tapioca with potable water.
- Keep pearl tapioca in covered containers and away from raw food.
- Always follow good personal hygiene practices.

