Tips for Safe Production of Lo Shui and Like Products, Jellyfish and Bean Curd with Lime Preserved Eggs

A study in 2009 has shown that some Chinese cold dishes including Lo Shui and like products, jellyfish and bean curd with lime preserved eggs available in the local market may have sub-optimal microbiological quality and some may even be potentially hazardous to health. Factors such as insufficient cooking, post-cooking contamination, prolonged storage at room temperature and orthopsychic handling may affect the microbiological quality of food. To ensure food safety, special attention should be paid in producing these products as highlighted below.

A. Tips for the production of Lo Shui and like products¹ to ensure food safety

In general, Lo Shui and like products are prepared in advance and may be cooled and stored before serving. Manual handling may also be involved after cooking. Below are the measures which need special attention during production:

- Estimate the demand carefully to avoid over-production.
- Cook Lo Shui and like products thoroughly, with core temperature at 75°C or above for at least 30 seconds.
- Cool Lo Shui and like products 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.
- After proper cooling, refrigerate Lo Shui and like products which are kept under room temperature within 2 hours or discard them after 4 hours.
- Use separate utensils to handle raw food and cooked food i.e. Lo Shui and like products.
- Always follow good personal hygiene practices.

B. Tips for the production of jellyfish to ensure food safety

In general, the preparation of jellyfish involves cooking and cooling / rinsing with water. Below are the measures which need special attention during production:

- Cool / rinse jellyfish with potable water.
- Keep jellyfish in covered containers and away from raw food in the refrigerator; check the temperature of the refrigerator frequently to ensure the temperature is at 4°C or below.
- Always follow good personal hygiene practices.

C. Tips for the production of bean curd with lime preserved eggs¹ to ensure food safety

In general, the preparation of bean curd with lime preserved eggs involves manual handling. Below are the measures which need special attention during production:

- Use separate utensils to handle raw food and ready-to-eat food i.e. bean curd with lime preserved eggs.
- Always follow good personal hygiene practices.

¹Variations are expected in different production schedule or in preparing different types of products.
In Hong Kong, the world’s gourmet paradise, various regional Chinese cuisines such as Beijing, Shanghai, Chiu Chow and Canton are available. Local premises usually offer a wide variety of cold and hot dishes for consumers. Chinese cold dishes can be prepared in different ways, e.g., some may involve cooking, some are just prepared from raw ingredients, and some are mixed with both cooked and raw ingredients. Being cold dishes, they may be prepared in advance and stored at room temperature for a period of time before serving and they are not usually reheated before consumption. These factors may affect the safety and hygiene quality of the products.

A variety of microorganisms such as mould, yeast and bacteria may naturally be found in raw ingredients. If the ingredients are cooked thoroughly, most microorganisms are destroyed. However, some bacterial spores e.g. Bacillus cereus and Clostridium perfringens spores may survive cooking. Prolonged storage of ready-to-eat food under room temperature may allow microorganisms to grow and spores to germinate, multiply and may even produce harmful toxins. In addition, improper handling of food may also result in contamination by dangerous microorganisms e.g. Staphylococcus aureus which may be present on human skin.

In order to ensure food safety, it is important to implement food safety measures in the production of Chinese cold dishes.

### Introduction

This set of guidelines is intended for food businesses that prepare and sell Chinese cold dishes at premises. It aims to help food trade implement food safety measures in their operations in order to produce and sell wholesome and safe cold dishes.

### Food Safety Measures for Preparing Chinese Cold Dishes

In order to prepare safe and wholesome food, including Chinese cold dishes, for consumers, it is essential to follow the 5 Keys to Food Safety in the daily operations.

#### 1. Choose

- Choose safe raw materials
- Choose food before its expiry date
- Use fresh and wholesome food ingredients and check the quality of the ingredients upon receipt

#### 2. Clean

- Keep hands and utensils clean
- Store food and food ingredients preferably in containers with lids at safe temperatures e.g. perishable items including fresh fish and meat at 4°C or below.
- Store food in containers with lids to avoid contact between raw food and cooked food or ready-to-eat food.
- Avoid cross-contamination by washing hands and utensils after handling raw food.
- Store raw meat, poultry, and seafood below cooked food or ready-to-eat food in the refrigerator to prevent juices from dripping onto ready-to-eat food or cooked food.
- Apply the first-in-first-out principle to store food. Do not use food beyond its expiry date or expected shelf life.

#### 3. Separate

- Separate raw and cooked food
- Use separate utensils to handle raw food and cooked food or ready-to-eat food e.g. use different colours codes for different utensils (including cutting boards and knives).

#### 4. Cook

- Cook thoroughly, with core temperature at 75°C or above for at least 30 seconds
- Bring soaking sauce to a boil and continue to boil for at least 1 minute in cooking or reheating

#### 5. Safe Temperature

- Keep food at safe temperature
- Apply the first-in-first-out principle to store food.

Below are some practical tips on how you can practise the 5 Keys to Food Safety in the production of Chinese cold dishes.

### Preparation

- Estimate the demand of each type of dish carefully to avoid over production
- Plan the production schedule ahead to avoid preparing dishes too far in advance
- Food contact surfaces of equipment and utensils should be maintained in a clean and sanitary condition.
- Use separate utensils to handle raw food and cooked food or ready-to-eat food e.g. use different colours codes for different utensils (including cutting boards and knives).

### Cooling

- Cool food 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.
- Use potable water / ice whenever necessary to cool food.

### Cold Holding

- Keep ready-to-eat dishes in covered containers and away from raw food, in the upper compartment if stored in the same refrigerator, with temperature at 4°C or below.
- Check the temperature of the refrigerator regularly to ensure that the food is kept at designated temperature.
- As a general rule, after proper cooling; if cooked Chinese cold dishes have been kept under room temperature:
  - for less than 2 hours, they can be refrigerated for use only after used or before the 4 hours limit is up.
  - for more than 2 hours but less than 4 hours, they should be used within the 4 hours limit is up but should not be returned to the refrigerator.
  - for more than 4 hours, they should be discarded.
- Adjust appropriate measures to ensure first-in-first-served dishes which are cooked or prepared in advance e.g. use date and time coding to show the storage time.

### Personal Hygiene

- Always follow good personal hygiene practices, including:
  - Wash hands thoroughly with running water and soap for 20 seconds before and after handling foods, often during food preparation and after going to the toilet.
  - Wear clean and light-coloured outer clothing or protective overalls.
  - Refrain from smoking and eating during preparation. Open wound should be covered by bright-coloured waterproof bandages or gloves.
  - Avoid contact with food during food preparation and after going to the toilet.
  - Avoid contact with food during cooking and reheating
  - Wash hands thoroughly with running water and soap for 20 seconds before and after handling foods, often during food preparation and after going to the toilet.
  - Wear clean and light-coloured outer clothing or protective overalls.
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  - Avoid contact with food during food preparation and after going to the toilet.
  - Avoid contact with food during cooking and reheating
Food Safety Measures for Preparing Chinese Cold Dishes

In order to prepare safe and wholesome food, including Chinese cold dishes, for consumers, it is essential to follow the 5 Keys to Food Safety in the daily operations.

1. Choose (Choose safe raw materials)
2. Clean (Keep hands and utensils clean)
3. Separate (Separate raw and cooked 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 Chinese cold dishes.

Purchase and Receiving
- Obtain food and food ingredients from approved and reliable sources.
- Choose food before its expiry date.
- Use fresh and wholesome food ingredients and check the quantities of the ingredients upon receipt.

Storage
- Store food and food ingredients preferably in containers with lids at safe temperatures e.g. perishable items including fresh fish and meat at 4°C or below.
- Ideally, use two separate refrigerators for storing raw food and cooked food or ready-to-eat food.
- If raw food and cooked food or ready-to-eat food have to be stored in the same refrigerator, do the following:
  - Store food in containers with lids to avoid contact between raw food and cooked food or ready-to-eat food.
  - Store raw meat, poultry, and seafood before cooked food or ready-to-eat food in the refrigerator to prevent juices from dripping onto ready-to-eat food or cooked food.
- Apply the first-in-first-out principle to store food. Do not use food beyond its expiry date or expected shelf life.

Preparation
- Estimate the demand of each type of dish carefully to avoid over-production.
- Plan the production schedule ahead to avoid preparing dishes too far in advance.
- Food contact surfaces of equipment and utensils should be maintained in a clean and sanitary condition.
- Use separate utensils to handle raw food and cooked food or ready-to-eat food e.g. use different colours codes for different utensils (including cutting boards and knives).

Cooking
- Cook thoroughly, with core temperature at 75°C or above for at least 30 seconds.
- Bring sauce heating to a boil and continue to boil for at least 1 minute in cooking or reheating.

Cooling
- Cool food 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.
- Use potable water / ice whenever necessary to cool food.

Cool Holding
- Keep ready-to-eat dishes in covered containers and away from raw food, in the upper compartment if stored in the same refrigerator, with temperature at 4°C or below. Check the temperature of the refrigerator regularly to ensure that the food is kept at designated temperature.
- As a general rule, after proper cooling, if cooked Chinese cold dishes have been kept under room temperature:
  - 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 within the 4 hours limit is up but should not be returned to the refrigerator.
  - for more than 4 hours, they should be discarded.
- Adopt appropriate measures to ensure first-in-first-served order of dishes which are cooked or prepared in advance e.g. use date and time coding to show the storage time.

Personal Hygiene
- Always follow good personal hygiene practices, including:
  - Wash hands thoroughly with running water and soap for 20 seconds before and after handling foods, often during food preparation and after going to the toilet.
  - Wear clean and light-coloured outer clothing or protective overalls;
  - Refrain from smoking and eating during preparation. Open wound should be covered by bright-coloured waterproof bandages or gloves;
  - Suspect 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.

A generic flow diagram of the production of different Chinese cold dishes (Some may involve cooking, some are just prepared from raw ingredients, and some are mixed with both cooked and raw ingredients)

This set of guidelines is intended for food businesses that prepare and sell Chinese cold dishes at premises. It aims to help food trade implement food safety measures in their operations in order to produce and sell wholesome and safe cold dishes.

Introduction
In Hong Kong, the world’s gourmet paradise, various regional Chinese cuisines such as Beijing, Shanghai, Cheo Cheo and Canton are available. Local premises usually offer a wide variety of cold and hot dishes for consumers.

Chinese cold dishes can be prepared in different ways, e.g. some may involve cooking, some are just prepared from raw ingredients, and some are mixed with both cooked and raw ingredients. Being cold dishes, they may be prepared in advance and stored at room temperature for a period of time before serving and they are not usually reheated before consumption. These factors may affect the safety and hygiene quality of the products.

A variety of microorganisms such as mould, yeast and bacteria may naturally be found in raw ingredients. If the ingredients are cooked thoroughly, most microorganisms are destroyed. However, some bacterial spores e.g. Staphylococcus aureus spores may survive cooking. Prolonged storage of ready-to-eat food under room temperatures e.g. perishable items which may be present on human skin.

In order to ensure food safety, it is important to implement food safety measures in the production of Chinese cold dishes.

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In order to ensure food safety, it is important to implement food safety measures in the production of Chinese cold dishes.

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Food Safety Measures for Preparing Chinese Cold Dishes

In order to prepare safe and wholesome food, including Chinese cold dishes, for consumers, it is essential to follow the 5 Keys to Food Safety in the daily operations.

1. Choose (Choose safe raw materials)
2. Clean (Keep hands and utensils clean)
3. Separate (Separate raw and cooked 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 Chinese cold dishes.

**Purchase and Receiving**
- Obtain food and food ingredients from approved and reliable sources.
- Choose food before its expiry date.
- Use fresh and wholesome food ingredients and check the quality of the ingredients upon receipt.

**Storage**
- Store food and food ingredients preferably in containers with lids at safe temperatures e.g. perishable items including fresh fish and meat at 4°C or below.
- Ideally, use two separate refrigerators for storing raw food and cooked food or ready-to-eat food.
- If raw food and cooked food or ready-to-eat food have to be stored in the same refrigerator, do the following:
  - Store food in containers with lids to avoid contact between raw food and cooked food or ready-to-eat food.
  - Store raw meat, poultry, and seafood below cooked food or ready-to-eat food in the refrigerator to prevent juices from dripping onto ready-to-eat food or cooked food.
- Apply the first-in-first-out principle to store food. Do not use food beyond its expiry date or expected shelf life.

**Preparation**
- Estimate the demand of each type of dish carefully to avoid over production.
- Plan the production schedule to avoid preparing dishes too far in advance.
- Food contact surfaces of equipment and utensils should be maintained in a clean and sanitary condition.
- Use separate utensils to handle raw food and cooked food or ready-to-eat food e.g. use different colours codes for different utensils (including cutting boards and knives).

**Cooling**
- Cook thoroughly, with core temperature at 75°C or above for at least 30 seconds.
- Bring soaking sauce to a boil and continue to boil for at least 1 minute in cooking or reheating.

**Cold Holding**
- Keep ready-to-eat dishes in covered containers and away from raw food in the upper compartment if stored in the same refrigerator, with temperature at 4°C or below. Check the temperature of the refrigerator regularly to ensure that the food is kept at designated temperature.
- As a general rule, after proper cooling, if cooked Chinese cold dishes have been kept under room temperature:
  - 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 within the 4 hours limit is up but should not be returned to the refrigerator.
  - for more than 4 hours, they should be discarded.
- Adjust appropriate measures to ensure first-in-first-use of dishes which are cooked or prepared in advance e.g. use date and time coding to show the storage time.

**Personal Hygiene**
- Always follow good personal hygiene practices, including:
  - Wash hands thoroughly with running water and soap for 20 seconds before and after handling foods, often during food preparation and after going to the toilet.
  - Wear clean and light-coloured outer clothing or protective overalls;
  - refrain from smoking and eating during preparation. Open wound should be covered by bright-coloured waterproof bandages or gauze.
- 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.

A generic flow diagram of the production of different Chinese cold dishes (Some may involve cooking, some are just prepared from raw ingredients, and some are mixed with both cooked and raw ingredients)
A. Tips for the production of Lo Shui and like products\textsuperscript{1} to ensure food safety

In general, Lo Shui and like products are prepared in advance and may be cooled and stored before serving. Manual handling may also be involved after cooking. Below are the measures which need special attention during production:

- Estimate the demand carefully to avoid over-production.
- Cook Lo Shui and like products thoroughly, with core temperature at 75°C or above for at least 30 seconds.
- Cool Lo Shui and like products 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.
- After proper cooling, refrigerate Lo Shui and like products which are kept under room temperature within 2 hours or discard them after 4 hours.
- Use separate utensils to handle raw food and cooked food i.e. Lo Shui and like products.
- Always follow good personal hygiene practices.

B. Tips for the production of jellyfish to ensure food safety

In general, the preparation of jellyfish involves cooking and cooling/rinsing with water. Below are the measures which need special attention during production:

- Cook / rinse jellyfish with potable water.
- KEEP jellyfish in covered containers and away from raw food in the refrigerator; check the temperature of the refrigerator frequently to ensure the temperature is at 4°C or below.
- Always follow good personal hygiene practices.

C. Tips for the production of bean curd with lime preserved eggs\textsuperscript{1} to ensure food safety

In general, the preparation of bean curd with lime preserved eggs involves manual handling. Below are the measures which need special attention during production:

- Use separate utensils to handle raw food and ready-to-eat food i.e. bean curd with lime preserved eggs.
- Always follow good personal hygiene practices.

\textsuperscript{1}Variations are expected in different production schedule or in preparing different types of products.
**A. Tips for the production of Lo Shui and like products** to ensure food safety

In general, Lo Shui and like products are prepared in advance and may be cooled and stored before serving. Manual handling may also be involved after cooking. Below are the measures which need special attention during production:

- Cook Lo Shui and like products thoroughly, with core temperature at 75°C or above for at least 30 seconds.
- Remove cross-contamination
- Avoid prolonged storage at room temperature
- Always follow good personal hygiene practices

**B. Tips for the production of jellyfish to ensure food safety**

In general, the preparation of jellyfish involves cooking and cooling/rinsing with water. Below are the measures which need special attention during production:

- Use potable water to cool/rinse jellyfish
- Cook thoroughly
- Store properly
- Check the temperature of the refrigerators frequently
- Always follow good personal hygiene practices

**C. Tips for the production of bean curd with lime preserved eggs** to ensure food safety

In general, the preparation of bean curd with lime preserved eggs involves manual handling. Below are the measures which need special attention during production:

- Obtain from approved and reliable sources
- Cook thoroughly
- Cool properly
- Cook thoroughly
- Follow good personal hygiene practices
- Avoid cross-contamination

Variations are expected in different production schedule or in preparing different types of products.