

未經烹煮的蔬菜和沙律的安全指引

Food Safety Guidelines for Raw Vegetables and Salads



引言

Introduction

未經烹煮的蔬菜是指那些在製造及處理過程中不用烹煮，而在食用前也不會烹煮的蔬菜。

Raw vegetables intended for human consumption refer to those vegetables which have not been cooked and will not undergo cooking before consumption.



引言

Introduction

在香港，這類蔬菜主要是：

In Hong Kong such vegetables are mainly available in two forms:

- 新鮮蔬菜（例如用以配製沙律或酸捲心菜絲的蔬菜）；以及
 - 醃製的蔬菜（例如經發酵或加酸的蔬菜）。
- fresh vegetables (e.g. used as ingredients of salads or coleslaw); and
 - preserved vegetables (e.g. fermented or acidified vegetables).



未經烹煮的蔬菜常見的食物安全問題

Common food safety problems related to raw vegetables

新鮮蔬菜可能含有多種致病菌（例如沙門氏菌和李斯特菌）、腸臟病毒（例如諾如病毒和甲型肝炎病毒），以及寄生蟲（例如圓孢子蟲菌、藍氏賈第鞭毛蟲和微小隱孢子蟲）。

Fresh vegetables may harbour a variety of bacterial pathogens (e.g. *Salmonella* and *Listeria monocytogenes*), enteric viruses (e.g. Norovirus and Hepatitis A virus) and parasites (e.g. *Cyclospora cayetanensis*, *Giardia lamblia* and *Cryptosporidium parvum*).

未經烹煮的蔬菜常見的食物安全問題

Common food safety problems related to raw vegetables



發酵/醃製蔬菜（例如泡菜），如配製恰當，發酵產生的化學物（例如有機酸和乙醇）或醃製時所用的醋、糖及/或鹽，一般都可確保食物的細菌性安全。然而，發酵/醃製的蔬菜所選用原材料如受傳染期的寄生蟲污染，單靠發酵或鹽醃（或加酸）過程未必能殺死寄生蟲。

Fermented/pickled vegetables such as kimchi, if properly prepared, the bacteriological safety of the food is usually guaranteed through the production of chemicals such as organic acids and ethanol during fermentation, or the use of vinegar, sugar and/or salt during pickling. However, fermented/pickled vegetables using raw ingredients that have been contaminated with infective parasite stages have the potential to cause human infection because fermentation or salting (or acidifying) alone may be insufficient to kill the parasites.

圓孢子蟲病

Cyclosporiasis

- 圓孢子蟲病是一種由寄生蟲圓孢子蟲菌引致的腸胃病。圓孢子蟲菌因體積太小而未能被肉眼看見。食用了受圓孢子蟲菌污染的食物或食水有可能患病。潛伏期平均約為一星期，常見的病徵包括水狀腹瀉、胃痛、腹脹、噁心、食慾不振、體重下降及疲倦。

Cyclosporiasis is an intestinal illness caused by the parasite *Cyclospora cayetanensis* which is too small to be seen with the naked eye. People can become infected with *Cyclospora* by consuming food or water contaminated with the parasite. The average incubation period of cyclosporiasis is about one week and common symptoms include watery diarrhoea, abdominal cramps, bloating, nausea, loss of appetite, weight loss and fatigue.

圓孢子蟲病

Cyclosporiasis

- 圓孢子蟲菌普遍是通過受感染的糞便污染了食物（例如蔬菜）或水以進行傳播。它不太可能直接在人與人之間傳播，因為圓孢子蟲菌蟲卵（卵囊）隨糞便排出後，需要一段時間（數天至數週）才能具備傳染性。

Cyclospora is generally transmitted when infected feces contaminates food (e.g. vegetable) or water. It's unlikely to be transmitted directly from person to person because the *Cyclospora* parasite's eggs (oocysts) needs time (days to weeks) after being passed in feces to become infectious.

- 美國最近爆發圓孢子蟲病，西生菜或為此次疫情的"元兇"。
It has been an outbreaks of cyclosporiasis in the United States recently. Iceberg lettuce may be the possible vehicle for the infection.



圓孢子蟲病

Cyclosporiasis

- 圓孢子蟲菌對一般含氯消毒劑具有抵抗力，而商業清洗流程可能不足以去除這種寄生蟲。

Cyclospora parasites are resistant to standard chlorine-based sanitizers. Commercial washing processes may not be sufficient to remove the parasite.

- 在乾淨的流動水下徹底沖洗農產品是適當的第一步，但可能無法可靠地去除寄生蟲。對於質地堅硬的農產品，應使用乾淨的蔬果刷刷洗。

Rinse produce thoroughly under clean running water is an appropriate first step but may not reliably eliminate the parasite. Use a clean vegetable brush to scrub firm produce.



圓孢子蟲病 Cyclosporiasis



- 應盡可能剝除葉菜類最外層的兩至三層葉片。
Discard the outer two to three layers of leafy greens when possible.
- 處理食物前後，應清洗並消毒器具和檯面。
Wash and sanitize utensils and food contact surfaces before and after handling food.
- 出現嘔吐或腹瀉症狀的食物從業員不得在店舖處理食物，以降低交叉污染風險。
Food handlers with symptoms of vomiting or diarrhea should not handle food in food establishments to reduce risk of cross-contamination.

圓孢子蟲病

Cyclosporiasis

- 從認可及可靠的來源購入原材料，並保留獲取食物的紀錄。應隨時留意食品回收指引，並銷毀或退回受影響批次的食品。
Obtain raw materials from approved and reliable sources. Keep record of acquisition of food. Stay updated with food recalls and dispose or return the affected batch of food.
- 應徹底清洗並消毒所有曾接觸回收食品或潛在受污染產品的儲存箱、冰箱、檯面及器具。
Thoroughly clean and sanitize all storage bins, refrigerators, countertops, and utensils that came into contact with the recalled item and potentially contaminated products.

沙律常見的食物安全問題

Common food safety problems related to salads

原材料被病菌、有害化學物及 / 或外來物污染

Presence of harmful bacterial, chemicals and foreign material in raw materials



沙律常見的食物安全問題

Common food safety problems related to salads

食材在配製過程中受污染

Contamination of ingredients during preparation



沙律常見的食物安全問題

Common food safety problems related to salads

貯存狀況及溫度不當
Improper storage condition
and temperature



製作沙律的食物安全措施

Food safety measures for the preparation of salads

(1) 採購及收貨 Purchase and receiving

- 採購時應選擇來自認可及可靠來源的食材。
When making purchases, choose food ingredients from approved and reliable sources.
- 只採用沒有瘀傷或破損的食材。
Only accept those food ingredients that are not bruised or damaged.



製作沙律的食物安全措施

Food safety measures for the preparation of salads

(2) 貯存 Storage



- 立即把食材貯存於適當的溫度（冷凍食物貯存在攝氏4度或以下；冷藏食物貯存在攝氏零下18度或以下）。
Immediately store food ingredients at proper temperatures (chilled items at 4°C or below; frozen items at -18°C or below).
- 將已熟或即食配料覆蓋或包好，並跟生的食材分開存放在雪櫃內，以防止交叉污染。
Cover/wrap cooked or ready-to-eat food ingredients and store separately from raw food ingredients in the refrigerator to prevent cross-contamination.

製作沙律的食物安全措施

Food safety measures for the preparation of salads

(3) 配製 Preparation

- 在開始工作前，先清潔和消毒所有配製食物的器具及工作面。
Clean and sanitise all food preparation utensils and surfaces before starting work.
- 用不同的設備和用具分開處理熟食或即食食物和生的食物，以減少交叉污染。
Use separate equipment and utensils to handle cooked or ready-to-eat food and raw food to avoid cross-contamination.
- 時刻保持良好個人衛生習慣。
Maintain good personal hygiene at all times.



製作沙律的食物安全措施

Food safety measures for the preparation of salads

(4) 供應/包裝 Dish Serving / Packing

- 配製好的配料或沙律應立即食用。如非即時食用，應置於清潔的容器內，存放在攝氏4度或以下，不可在攝氏4度以上存放超過兩小時。
Serve prepared ingredients or prepared salads immediately. If not for immediate use, keep in clean containers at 4°C or below and avoid holding at temperatures above 4°C for more than two hours.
- 已製成的沙律應加上標籤列明「此日期或之前食用」日期及貯存條件。
Packed salads, should be labelled with a “use-by” date and a statement of storage condition.

製作沙律的食物安全措施

Food safety measures for the preparation of salads

(5) 運送、分發和展示 Transportation, distribution and display

- 按照「先入先出」的原則分發和售賣已製成的沙律。
Distribute and sell finished products on a first-in-first-out (FIFO) basis.
- 在攝氏4度或以下妥善運送、分發和展示已製成的沙律，以防沙律受污染和變壞。
Transport, distribute and display prepared salads properly at 4°C or below to protect them from contamination and deterioration.

自助式沙律櫃枱

Self-serve salad bars



- 用清潔的容器在攝氏4度或以下展示沙律配料
Display salad ingredients in clean containers in a refrigerated display at 4°C or below.
- 供應足夠清潔並已消毒的用具如長柄鉗子或杓子
Provide a sufficient number of clean and sanitised serving tools, such as tongs or ladles with long handles.
- 監察沙律櫃枱範圍的衛生情況
Monitor the sanitary conditions of the salad bar area.



給食物處理人員的個人及環境衛生建議

Advice on Personal and Environmental Hygiene for Food Handlers

(1) 個人衛生 Personal Hygiene

- 穿著保護衣服，包括清潔的工作服、即棄手套及口罩。
Wear protective clothing including clean overalls, disposable gloves and face mask.
- 熟悉手部衛生指引。
Familiar with wash hand guideline.
- 妥為包紮外露的傷口，並戴上手套。
Properly cover open wounds and wear gloves.
- 如患有傳染病，應停止處理食物。
Suspend from handling food when suffering from infectious disease.

給食物處理人員的個人及環境衛生建議

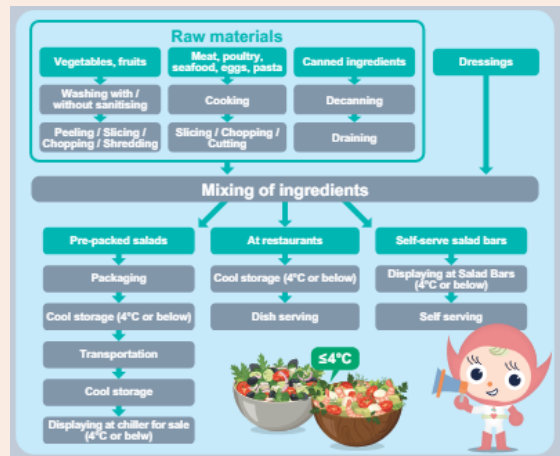
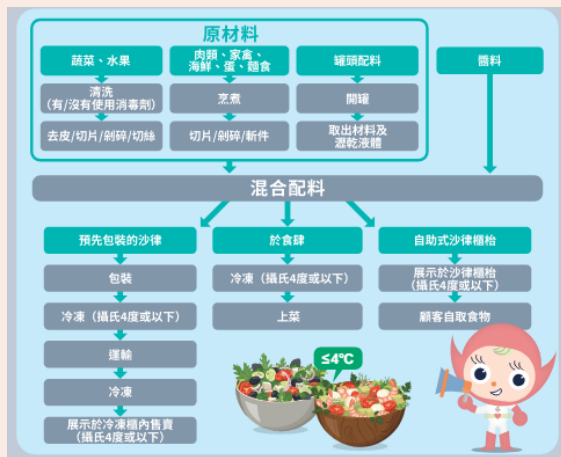
Advice on Personal and Environmental Hygiene for Food Handlers

(2)環境衛生 Environmental Hygiene

- 洗手及乾手設施應設於食物配製區的適當位置，並備有洗手液。Hand washing and drying facilities should be suitably located in food preparation area and supplied with liquid hand soap.
- 處理食物前後，應清洗並消毒器具和檯面。
Wash and sanitize utensils and surfaces before and after handling food.
- 保持冷凍設施狀態良好。
Keep refrigeration facilities in good condition.

沙律的製作流程圖

Flow diagram of salad production



食物安全管理系統

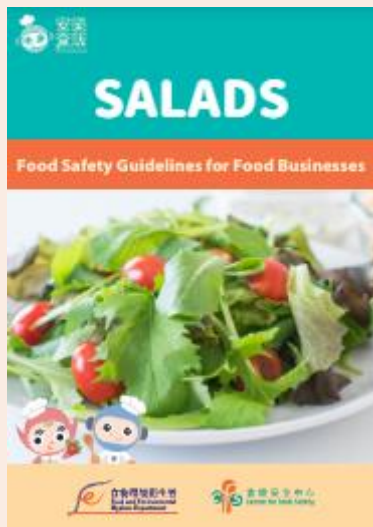
推行一個具有防患於未然的食物安全管理系統（如以「食物安全重點控制」系統為本的食物安全計劃），以在製造過程的每個環節中確定及控制食物安全問題。詳情請參閱「[如何推行食物安全計劃](#)」。



Food safety management system

Implement a preventive food safety management system (such as the HACCP-based Food Safety Plan) to identify and control food safety problems at every stage of the food manufacturing process. Please refer to the "[How to Implement a Food Safety Plan](#)" for details.





謝謝
Thank you

