



由食物環境衛生署食物安全中心於每月第三個星期三出版
Published by the Centre for Food Safety, Food and Environmental Hygiene Department on every third Wednesday of the month

本期內容 IN THIS ISSUE

焦點個案

- ❖ 供生吃的預先去殼生蠔 – 該注意什麼？

食物安全平台

- ❖ 家裏停電時如何確保食物安全？

食物事故點滴

- ❖ 食物送遞商提供非食物送遞服務的食物安全問題
- ❖ 食物安全日2021 – 「生冷」食物查清楚 高危人士咪漏咗

風險傳達工作一覽

Incident in Focus

- ❖ Pre-shucked Oysters for Raw Consumption – What Should One be Aware of?

Food Safety Platform

- ❖ How to Keep Food Safe in Case of a Power Cut at Home?

Food Incident Highlight

- ❖ Food Safety Issues of Food Delivery Agencies Providing Non-food Delivery Services
- ❖ Food Safety Day 2021 - Read and check, Be like Detective CFS!

Summary of Risk Communication Work

焦點個案 Incident in Focus

供生吃的預先去殼生蠔 – 該注意什麼？

Pre-shucked Oysters for Raw Consumption – What Should One be Aware of?

食物安全中心風險傳達組
科學主任游天頌先生報告

Reported by Mr. Arthur YAU, Scientific Officer,
Risk Communication Section, Centre for Food Safety

進口的膠盒裝預先去殼生蠔在市面上受歡迎程度日漸增加，而這些蠔都被標示為適合生吃。眾所周知，進食生蠔(包括生醃的)有食物中毒風險，在本文中，我們會把焦點放在預先去殼生蠔所涉及的特有微生物風險。

The market sees an increasing popularity of imported pre-shucked raw oysters packed in plastic tubs, which are allegedly fit to be consumed raw. While the stake of food poisoning that the raw shellfish, including marinated ones, poses are well known, in this article we shall focus on the microbiological risks specifically involved with pre-shucked raw oysters.

生蠔是高風險食物

蠔是濾食性動物，由於經常過濾海水，體內累積水中的物質，包括**弧菌**、**諾如病毒**及**甲型肝炎病毒**等病原體。人類進食生或未煮熟的蠔，可能會感染這些病原體。此外，如果從採收到食用期間蠔隻沒有保持足夠低溫，在採收後弧菌等細菌仍可在蠔的體內繼續生長。與生蠔有關的食物中毒個案在本港時有報道。雖然患者病情多屬輕微，只出現腹瀉、腹痛及嘔吐等症狀，並會自行痊癒，但生蠔亦有可能導致健康嚴重受損，特別是**高危人士**。

Raw Oysters are High-risk Foods

Oysters are filter feeders. They constantly draw in water and accumulate materials from water, including pathogens such as [Vibrio bacteria](#), [norovirus](#) and [hepatitis A virus](#). These pathogens can infect people who eat oysters raw or undercooked. In addition, bacteria like *Vibrio* can continue to grow in oysters after harvesting if oysters are not maintained at low enough temperatures from harvest through to consumption. Food poisoning outbreaks related to raw oysters have been reported locally from time to time. Although the illness is usually mild and self-limiting, causing symptoms such as diarrhoea, abdominal cramps and vomiting, they can also cause severe health consequences especially for [susceptible individuals](#).



圖1: 冰鮮膠盒裝預先去殼生蠔及半開殼生蠔

Figure 1: A photo of chilled pre-shucked raw oysters in a plastic tub and half-shell raw oysters

Additional Risks in Shucked Oysters

Both physical and microbiological contamination are possible during the shucking of oysters. Physical removal of shellfish meat from the shell at the shucking table often exposes the product to dirt, mud and detritus. Shucked oysters should be rinsed or washed well to eliminate these contaminants and to reduce microbiological level of the products. Good hygiene practices should also be observed to minimise contamination from the workers and the working environment.

編輯委員會 EDITORIAL BOARD

總編輯

楊子橋醫生

顧問醫生(社會醫學)(風險評估及傳達)

行政編輯

吳志翔醫生

首席醫生(風險評估及傳達)

委員

陳國雄醫生 署理首席醫生(風險管理)

傅玉清醫生 署理首席醫生(風險管理)

戴慶豐獸醫 高級獸醫師(獸醫公共衛生)

張偉文先生 高級總監(食物安全中心)

朱瑞燕女士 高級總監(食物安全中心)

譚秀琼醫生 主管(風險評估組)

陳以信博士 高級化驗師(食物研究化驗所)

Editor-in-chief

Dr. Samuel YEUNG

Consultant (Community Medicine)

(Risk Assessment and Communication)

Executive Editor

Dr. Henry NG

Principal Medical Officer

(Risk Assessment and Communication)

Members

Dr. Addi CHAN

Acting Principal Medical Officer (Risk Management)

Dr. Alex FU

Acting Principal Medical Officer (Risk Management)

Dr. Eric TAI

Senior Veterinary Officer (Veterinary Public Health)

Mr. W M CHEUNG

Senior Superintendent (Centre for Food Safety)

Ms. S Y CHU

Senior Superintendent (Centre for Food Safety)

Dr. Carole TAM

Head (Risk Assessment Section)

Dr. Gabriel CHAN

Senior Chemist (Food Research Laboratory)

焦點個案
Incident in Focus

去殼生蠔的額外風險

在去殼的過程中，蠔有可能受到物理及微生物污染。在去殼時把蠔肉從外殼中取出時，往往會接觸到污垢、泥土及碎屑。蠔隻去殼後應加以沖洗或清洗乾淨，以清除污染物和減低微生物的含量。此外，應遵從良好衛生規範，以減少工人及工作環境造成污染的機會。

如果在正確的溫度及條件下貯存，未去殼的蠔即使經過長途運輸，仍可以存活。然而，蠔在去殼後便會死亡，如果沒有保持足夠低溫以抑制細菌生長，生蠔會迅速變壞。去了殼的蠔應盡快包裝和冰鮮或冷藏。此外，在運送期間必須維持不間斷的冷鏈，才可確保蠔隻的安全及品質。

徹底煮熟 — 消滅病原體的可靠方法

烹煮可把病原體消滅，但必須保持高溫才有效。[烹煮至內部溫度達攝氏90度並維持90秒](#)，便足以消滅甲型肝炎病毒及諾如病毒等常見食源性病毒，確保安全。切記生蠔存有微生物風險，即使養殖場採取嚴格的控制及監察措施，也無法把風險完全消除。然而，如果選擇生吃蠔隻，應向可靠的持牌店鋪購買擬供生吃的蠔。

進口商應申領出口國有關當局發出的相關衛生證明書，以確定所進口的生蠔適宜供人食用。在本港，必須領有受限制食物售賣許可證，方可售賣供生吃的蠔。生蠔在到貨時及存放於食物業處所期間，應一直保持在攝氏4度或以下。食物處理人員在沖洗、清潔、去殼及其他配製過程中，應盡可能縮短生蠔在沒有冷凍控制下的時間。不同批次及種類的蠔應貯存在不同的容器中，並標明日期及種類。在直至供顧客食用前，應保留每批蠔的採收標籤及/或相關處理文件。

注意事項

1. 進食生蠔風險高，生吃預先去殼冰鮮蠔的風險則更高，因為在運輸過程中如溫度不當，蠔隻容易迅速滋生細菌。
2. 把蠔徹底煮熟，可消滅蠔隻中的食源性病原體。
3. 高危人士不應進食生或未煮熟的蠔。

給業界的建議

- 生蠔進口商應申領出口國有關當局發出的衛生證明書。
- 食物業應先取得發給持牌店鋪的受限制食物售賣許可證/書面批准，方可售賣供生吃的蠔。
- 供生吃的蠔在到貨時及供顧客食用前必須一直保持在攝氏4度或以下，以確保病原體沒有機會生長。
- 供應生蠔的食物業處所宜在餐牌或餐桌的展示卡上[向消費者作出食用忠告](#)。

給市民的建議

- 供生吃的進口預先去殼冰鮮蠔存有高風險。如有懷疑，便應避免食用。
- 購買供生吃的蠔，應光顧可靠的持牌店鋪，包括網上店鋪。留意預先包裝產品的狀況及食用期限。
- 把蠔烹煮至內部溫度達攝氏90度並維持90秒以殺死有害細菌及病毒，是消滅蠔隻中食源性病原體的唯一可靠方法。
- 孕婦、嬰幼兒、長者及免疫力弱人士不應進食生或未煮熟的蠔。

Before deshelling, oysters can stay alive even after long-haul shipping if kept under correct temperature and conditions. Once killed after shucking, raw oysters can deteriorate quickly if the temperature is not low enough to limit bacterial growth. Shucked oysters should be packed and chilled or frozen as soon as possible. Furthermore, an uninterrupted cold chain during transportation is critical to ensure safety and quality of the shellfish products.

Thorough Cooking – the Sure Way to Destroy Pathogens

Pathogens can be readily destroyed by cooking, but high heat must be held to be effective. [Cooking to an internal temperature of 90°C for 90 seconds](#) will provide a safety margin to inactivate common foodborne viruses like hepatitis A and norovirus. Remember that raw oysters have an inherent microbiological risk that cannot be completely eliminated, even with stringent control and monitoring measures at farm level. However, if choosing to savour the shellfish raw, buy oysters intended for raw consumption only from reliable licensed premises.

Importers should confirm that the raw oysters they import are fit for human consumption by obtaining relevant health certificates issued by relevant authorities of the exporting countries. In Hong Kong, a restricted food permit is required to sell oysters to be eaten in raw state. Raw oysters should be received and kept at 4°C or below all along at food premises. Food handlers should minimise the time spent outside of refrigerated control during rinsing, cleaning, shucking and other preparations of oysters. Different lots and varieties of oysters should be stored in separate containers labelled with date and variety. Keep shellfish harvest tag and / or relevant documentation of treatment with each batch of oysters until service.

Key Points to Note

1. Consuming raw oysters poses a high risk. Chilled pre-shucked oysters for raw consumption are riskier due to their susceptibility to temperature abuse during transportation and the subsequent rapid bacterial growth.
2. Thorough cooking can destroy the foodborne pathogens in oysters.
3. Susceptible populations should not consume raw or undercooked oysters.

Advice to the Trade

- Importers of oysters for raw consumption should obtain health certificates issued by relevant authorities of the exporting countries.
- Food businesses should obtain a restricted food permit / written endorsement for licensed premises before selling oysters for raw consumption.
- Oysters for raw consumption must be received and maintained at 4°C or less before service to ensure pathogens do not have the chance to grow.
- Food premises serving raw oysters are advised to [display a consumer advice](#) in the menu or on a display card at the table.

Advice to the Public

- Chilled oysters for raw consumption that are imported pre-shucked are particularly risky. Avoid consuming them.
- Purchase oysters for raw consumption only from reliable licensed premises, including those that are online. Look out for the condition and expiry date for prepackaged products.
- Cooking oysters to an internal temperature of 90°C for 90 seconds to kill harmful bacteria and viruses is the only sure way to destroy the foodborne pathogens in them.
- Pregnant women, infants and young children, the elderly and people with weakened immunity should not consume raw or undercooked oysters.

家裏停電時如何確保食物安全？

How to Keep Food Safe in Case of a Power Cut at Home?

食物安全中心風險傳達組
科學主任陳蓉蓉女士報告

Reported by Ms. Melva CHEN, Scientific Officer,
Risk Communication Section, Centre for Food Safety

長時間停電現今在香港已不常見，但基於惡劣天氣或設備故障等不可預見的因素，停電事故仍有可能突然發生。電力中斷可能為時數分鐘至數小時不等，雪櫃無法製冷，不少食物便會迅速變壞。雖然停電會造成不便，特別是如果雪櫃及冰格內存放了很多容易腐壞的食物，但不必恐慌。參考下文的貼士，便可在等待電力恢復時確保食物安全。

While prolonged power cut is uncommon nowadays in Hong Kong, unforeseeable factors such as adverse weather or equipment failure make power cut still possible to happen without prior notice. Power disruptions can extend from minutes to hours, and many foods spoil rapidly without refrigeration. Although power cut can be inconvenient, especially if you have a lot of perishable food in your refrigerator and freezer, there is no need to panic. The following tips help you keep your food safe while waiting for the power to come back on.

停電期間不要打開雪櫃及冰格

沒有電力供應，雪櫃及冰格便不能以安全溫度貯存食物。雪櫃內的食物必須貯存於攝氏4度或以下，而冰格內的食物則必須貯存於攝氏零下18度或以下，才能抑制可引致食源性疾病的有害細菌及其他微生物的生長。一旦停電，最佳的做法是不要打開雪櫃及冰格，此舉有助延長維持適當貯存溫度的時間，以免細菌在攝氏4度至60度的危險溫度範圍內迅速生長。

Keep the Fridge and Freezer Shut During Power Cut

Without electrical power, refrigerators and freezers will lose the ability to store foods at safe temperatures. Foods stored in fridges must be at 4°C or less and freezers should store products at -18°C or less to hinder the growth of harmful bacteria and other microorganisms that can cause foodborne illness. In case of power cut, the best thing to do is simply not to open the fridge and freezer, which helps maintain the proper storage temperatures as long as possible. This is to prevent bacteria from growing rapidly in the Temperature Danger Zone ranging from 4°C to 60°C.

海外食物主管當局(例如美國食物及藥物管理局、澳洲新西蘭食品標準管理局)普遍的共識是，如果雪櫃及冰格的門保持關閉，雪櫃可安全保存食物2至4小時；全滿的冰格可保存48小時；而半滿的冰格則可保存24小時。因此，知道何時開始停電，便可計算出雪櫃及冰格斷電的時間有多久，從而判斷哪些食物可供安全食用，哪些不可以。

A common consensus among overseas food authorities such as the US Food and Drug Administration and the Food Standards Australia New Zealand is that, if the doors stay closed, food will stay safe for 2 to 4 hours in a refrigerator; 48 hours in a full freezer; and 24 hours in a half-full freezer. Therefore, knowing the time the power cut starts is useful to track how long the refrigerator and freezer have been without power; this will help you determine which foods may be safe to eat and which ones are not.

電力恢復後遵從「4小時 / 2小時原則」

在電力恢復後，應檢查易壞食物的溫度，並計算食物可能置於安全溫度範圍以外的時間有多久。任何有潛在風險的食物，例如肉類、海產、蛋類、奶類、乳製品、切開的水果及熟食，如果置於攝氏4度至60度的時間少於2小時，應立即冷藏或使用；如果超過2小時但少於4小時，應立即使用；如果超過4小時，則應棄掉。

Follow the '4 hour / 2 hour rule' after the Power Resumes

After the power has been restored, people are advised to check the temperature of their perishable foods, considering how long they may have been out of the safe temperature range. For any potentially hazardous foods such as meat, seafood, eggs, milk, dairy products, cut fruits and cooked dishes that have been at temperatures between 4 °C and 60 °C, refrigerate or use immediately if kept for less than 2 hours; use immediately if longer than 2 hours but less than 4 hours; and toss away if more than 4 hours.

切勿以試吃來判斷食物是否可供安全食用，因為食物的味道或氣味未必會變壞。如果不肯定易壞食物是否安全，應直接丟掉。另一方面，可在室溫下貯存的食物較不易壞，若存放在雪櫃或冰格內，即使停電也未必要丟進垃圾桶。在停電時通常保存得較好的食物有高酸性食品(例如芥末、番茄醬、果醬、醃菜)、某些加工食品(例如花生醬、牛油、麵包)及大部分乾製食品。

Never taste foods to determine if they are safe to eat, as they might not give off a bad taste or odour. If unsure about the safety of your perishable foods, simply discard them. On the other hand, non-perishable foods that can be stored at room temperature and are kept in the fridge or freezer may not warrant the bin in the event of a power cut. High acid foods (e.g. mustard, ketchup, jams, pickles), certain processed foods (e.g. peanut butter, butter, bread) and most dried foods are typically kept better in power blackout situations.


未雨綢繆，做好應急準備

在平常日子，應確保雪櫃的溫度為攝氏4度或以下，而冰格則為攝氏零下18度或以下。最好在雪櫃及冰格內放置專用的溫度計。

停電之前、期間及之後的食物安全

Food Safety Before, During and After a Power Cut

停電之前
做好應急準備
Before
Prepare for emergencies



冰格 Freezer: ≤ -18°C 雪櫃 Refrigerator: ≤ 4°C

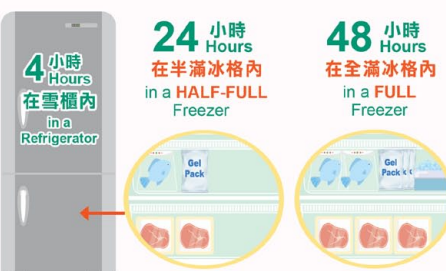
- 在雪櫃及冰格內放置專用的溫度計
Keep appliance thermometers in your refrigerator and freezer.
- 冰墊 Gel Pack
冰格內應常備一些冰塊及冰墊
Always keep some ice cubes and gel packs in your freezer.

停電期間
不要打開雪櫃及冰格
During
Keep refrigerators and freezers closed

4小時
在雪櫃內
in a Refrigerator

24小時
在半滿冰格內
in a HALF-FULL Freezer

48小時
在全滿冰格內
in a FULL Freezer



停電之後
停電超過4小時，應丟掉雪櫃內容易腐壞的食物
After
Throw out perishable food in your refrigerator after 4 hours without power

食物置於 Food held at 4°C - 60°C	立即冷藏 以供備用 For refrigeration to use later	立即使用及進食 For immediate use and consumption
<2 小時 hours	✓	✓
2-4 小時 hours	✗	✓
>4 小時 hours	✗	✗

- 丟掉任何出現異常氣味、顏色或質感的食物
Throw out any food with an unusual odor, colour, or texture.
- 切勿以試吃來判斷食物是否可供安全食用。如有懷疑，把食物丟掉
Never taste food to determine if it is safe to eat. When in doubt, throw it out.

圖2: 停電之前、期間及之後的食物安全

Figure 2: Food safety before, during and after a power cut

冰格內應常備一些冰塊及冰墊，可以使冰格保持常滿，有助於維持溫度，也可以在有需要把食物轉移到其他地方(例如親友的雪櫃)時用來保持食物冷凍。

丟棄食物雖然浪費金錢，但代價比不上食源性疾病，因為食源性疾病可能會導致健康嚴重受損，甚至死亡。如果懷疑食物變壞，不應冒險進食，特別是幼兒、長者及免疫力弱人士。小心為妙，方為上策。如有懷疑，把食物丟掉。此外，在緊急情況下仍須遵守食物安全五要點，以保護自己及身邊的人，防止感染食源性疾病。

Prepare for Emergency in Time of Peace

In non-crisis times, make sure the refrigerator should be at 4°C or below, and the freezer at -18°C or below. Ideally, keep appliance thermometers in your refrigerator and freezer. Always keep some ice cubes and frozen gel packs in the freezer. They can keep the freezer full to help maintain the temperature, and keep foods cold should they be transferred to other locations such as a friend or relatives' refrigerator.

Food can be very expensive to throw away but not as costly as food-borne illnesses which can cause severe health consequences as well as death. If any food is suspected to be deteriorated, it is not worth the risk, especially for young children, the elderly and those with compromised immune systems. It is always best to err on the side of caution - when in doubt, throw the food out. People should also adhere to the Five Keys to Food Safety during emergencies, protecting themselves and those around them from foodborne diseases.

食物事故點滴 Food Incident Highlight

食物送遞商提供非食物送遞服務的食物安全問題

Food Safety Issues of Food Delivery Agencies Providing Non-food Delivery Services

隨着上門送餐服務成為大勢所趨，一些食物送遞商乘勢擴展其業務，提供非食品的外送服務，例如送遞清潔劑、電池及文具用品。然而，此舉令人關注當中所涉及的食物安全問題。

與非食品一起包裝的食物，在運送過程中可能會被微生物、滲漏或濺溢出來的非食用化學品或雜質所污染。此外，在沒有時間或溫度控制的情況下送遞食物，會增加食物安全風險。送遞時貯存溫度不當，對非食品影響甚微，但卻可能會導致食物滋生細菌和變壞。

為了保障食物安全，食物送遞商應把食物存放在清潔和合適的容器中，並與非食品分開放進不同的貯存格內，以減少污染的機會。在送遞期間，應嚴格控制和監察食物的貯存溫度。至於食物送遞車輛方面，如果這些車輛或容器曾用於運送食物以外的任何物品，則應在每次運載之間都進行徹底清潔，以避免污染的風險。

While door-to-door meal delivery is hotly trending, some food delivery agencies are upscaling their businesses by providing delivery services of non-food items such as detergents, batteries and stationeries. This practice, however, raises certain food safety concerns.

Packed together with non-food items, foods might risk contamination by microorganisms, the leakage or spillage of non-edible chemicals or foreign substances during transportation. Besides, delivering foods without time or temperature control can increase food safety risk. While minimally affecting non-food items, delivery without proper holding temperatures could lead to bacterial growth and deterioration in food.

To safeguard food safety, food delivery agencies should store food in clean and suitable containers in separate compartments from non-food entities to minimise contamination. A tight control and monitoring on the food storage temperature during delivery should be in place. For food delivery vehicles, if those vehicles or containers have been used for transporting anything other than food, thorough cleaning is required between loads to avoid the risk of contamination.

食物安全日2021 - 「生冷」食物查清楚 高危人士咪漏咗

Food Safety Day 2021 - Read and check, Be like Detective CFS!

世界衛生組織發起一年一度的世界食品安全日，目的在於喚起關注並鼓勵採取行動，以協助預防、發現和管理食源性風險。食物安全中心(食安中心)自二零一八年起一直透過舉辦食物安全日來響應世界食品安全日。今年的食物安全日2021以《「生冷」食物查清楚 高危人士咪漏咗》為主題，旨在提高市民對「生冷」食物(即生或未煮熟的食物)所存風險的認識，特別是針對高危人士的風險。

宣傳活動於六月七日展開，包括發布社交媒體貼文、報章專欄、電台訪問，以及「食安電影頻道」系列的新短片。此外，也會編製教育資料，並舉辦講座，對象為食物處理人員、學校、院舍員工、家庭傭工及照顧者，內容重點包括高風險食物的食物安全問題、食物安全五要點及其他良好衛生規範。欲知最新的活動及資訊，請瀏覽食安中心Facebook專頁。

The annual World Food Safety Day launched by the World Health Organization aims to draw attention and inspire action to help prevent, detect and manage foodborne risks. The CFS has been echoing the World Food Safety Day since 2018 through its own Food Safety Day. The theme of Food Safety Day 2021 is 'Read and check, Be like Detective CFS!' which aims to enhance the public awareness of inherent risks concerning raw or undercooked foods, especially for susceptible populations.

A publicity campaign started on 7 June, including launching social media posts, newspaper columns, radio interviews and new videos of the 'CFS Movie Channel' series. Education materials will be prepared and talks will be delivered to food handlers, schools, staff of residential homes, domestic helpers and caregivers, focusing on the food safety issues of high-risk foods, Five Keys to Food Safety and other good hygiene practices. Please visit the CFS Facebook for our latest activities and information.



風險傳達工作一覽 (二零二一年六月)

Summary of Risk Communication Work (June 2021)

事故/食物安全個案 Incidents/ Food Safety Cases: 163	公眾查詢 Public Enquiries: 155	業界查詢 Trade Enquiries: 233	食物投訴 Food Complaints: 409	給業界的快速警報 Rapid Alerts to Trade: 3
給消費者的食物警報 Food Alerts to Consumers: 4	懷疑食物中毒個案通報 Suspected Food Poisoning Alerts: 0	教育研討會/演講/講座/輔導 Educational Seminars/ Lectures/Talks/ Counselling: 52	上傳到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 36	