



供生吃的蠔

給食物業的食物安全指引

Oysters

Intended for Raw Consumption
Food Safety Guidelines for Food Businesses



業界指引

Trade guidelines

- 旨在幫助食物業了解與生蠔的相關風險，並在運營中實施適切可行的食物安全措施，以減少食源性疾病的發生，同時讓高危的消費者做出知情的選擇。

- To assist the food businesses in understanding the risks associated with raw oysters and implementing appropriate and practical food safety measures in their operations to reduce the occurrence of foodborne illnesses while also allowing susceptible groups of consumers to make informed choices.



近日與生蠔有關的食物中毒個案

Recent Food Poisoning Cases Associated with Raw Oysters



由於沒有經過任何**熱處理**殺死食物中的食源性病原體，生吃蠔隻存有食物安全風險。

Eating raw oysters carries inherent food safety risks as there is **no heat treatment** to kill foodborne pathogens.

2021 年與生蠔有關的本地 食物中毒個案顯著上升

A prominent upsurge in local food-poisoning outbreaks related to raw oysters observed in 2021



生蠔中常見的污染物

Common contaminants in raw oysters

- 不斷過濾海水，體內累積水中的物質包括食源性病原體及毒素。
- Constantly draw in water and accumulate materials from water including foodborne pathogens and toxins.

類別 Types	風險 Risks	會否存在於煮熟的生蠔內? Present in cooked oysters?	在收穫後的生蠔內生長? Post-harvest growth inside oysters?
麻痺性貝類中毒 Paralytic shellfish poisoning	毒素 Toxin	會 Yes	不會 No
諾如病毒 Norovirus	病毒 Virus	有時 Sometimes (未熟透 inadequate cooking)	不會 No
甲型肝炎 Hepatitis A	病毒 Virus	有時 Sometimes (未熟透 inadequate cooking)	不會 No
弧菌 Vibrio species	細菌 Bacteria	很少 Rarely	會 Yes



生蠔的微生物風險

Microbiological risks of raw oysters

- 人們可通過進食生或未煮熟的蠔而感染具有抗菌素耐藥性的微生物（「超級細菌」）。
- 貝類在捕獲後如不立即清洗和冷藏，有害細菌會迅速繁殖。
- 弧菌會頑固地粘附在貝類的腸道上，即使清洗也不能去除。
- 冷藏不會殺死細菌，細菌可以在冷藏海鮮中存活幾個月。
- 生蠔必須完全煮熟以避免食源性疾病。
- 對高危人群（例如免疫系統較弱或患肝病的人群）有可能導致嚴重疾病，甚至死亡。

- People can be infected by microorganisms with antimicrobial resistance ('superbugs') through eating raw or under cooked oysters.
- If shellfish are not immediately cleaned and refrigerated after capture, harmful bacteria can proliferate rapidly.
- Vibrio organisms, for example, stick so tenaciously to the intestinal tracts of shellfish that washing them does not remove them.
- Freezing does not kill the bacteria, and they can survive in frozen seafood for several months.
- Oysters must be completely cooked to avoid foodborne diseases.
- Potential to cause severe illness and even death in those who are susceptible, such as those with a weaker immune system or liver disease.

實地參觀出售生蠔的食肆

Site visits to food premises
that sell raw oysters

- 於 2022 年 5 月至 8 月進行
- 訪問了15家食肆：
 - 超市
 - 網上商店
 - 零售店
 - 酒店自助餐廳
 - 西餐廳
 - 日式餐廳
 - 蠔吧

- Conducted between May and Aug 2022
- Interviewed 15 food premises
 - Supermarkets
 - Online shops
 - Retail outlets
 - Hotel buffet restaurants
 - Western restaurants
 - Japanese restaurants
 - Oyster bars

研究範圍

Study scope

- 知識、態度、做法
 - 購買
 - 接收
 - 貯存
 - 處理和製備
 - 展示與供應
 - 送貨
 - 食物經營者的其他職責



- Knowledge, Attitudes, Practices
 - Purchasing
 - Receiving
 - Storage
 - Handling and preparation
 - Display and serving
 - Delivery
 - Other responsibilities of food business operators

有殼的蠔與已去殼的蠔

Oysters in shells and Shucked oysters

蠔的種類	熟食	生食	備註
供生食的有殼活蠔 Live in-shell oysters intended for raw 	✓	✓	<ul style="list-style-type: none"> 如選擇生吃，應以適當方法處理以盡可能減低風 If choose to eat raw, follow the proper procedures to minimise the risk
供生食的急凍生蠔 Frozen oysters intended for raw consumption 	✓	✓	<ul style="list-style-type: none"> 只可在攝氏0至4度的雪櫃中解凍 Only thaw frozen oysters between 0-4°C in refrigerator
在原產地預先去殼的冰鮮生蠔 Chilled oysters pre-shucked at origin 	✓	X	<ul style="list-style-type: none"> 生蠔去殼即死，特別是長途運輸期間沒有嚴格的溫度控制，極容易變壞 去殼過程中可能受微生物污染 Raw oysters die immediately after being shelled, and are prone to spoilage, especially when there is improper temperature control during long-haul transportation Microbiological contamination may occur during shucking

知識及態度

- 大部分被訪者認同生蠔可能含有有害微生物、但部分人不認為生吃生蠔有風險。
- 大部分被訪者認同高危人士(孕婦、嬰幼兒、長者、免疫力弱的人士)應避免生吃生蠔。
- 有食肆(尤其是網店)對是否能為員工提供食物安全培訓的信心不足,或認為食物全培訓對其員工不太相關。
- 參與者的意見: 希望知道更多關於生蠔微生物風險和如何正確處理生蠔的信息。

Knowledge and attitudes

- Most of the interviewees agreed that raw shellfish might contain harmful microorganisms, but some did not think that eating raw shellfish is risky.
- Majority agreed that susceptible individuals such as pregnant women, young children, the elderly and people with a weakened immune system should avoid eating raw oysters.
- Some food premise (especially on-line shops) had low confident on providing food safety training to their staff or they thought food safety training is not relevant to their staff.
- Feedback from participants: wanted to know more about microbiological risks of oysters and how to handle oysters properly.

採購及接收

Purchasing and receiving

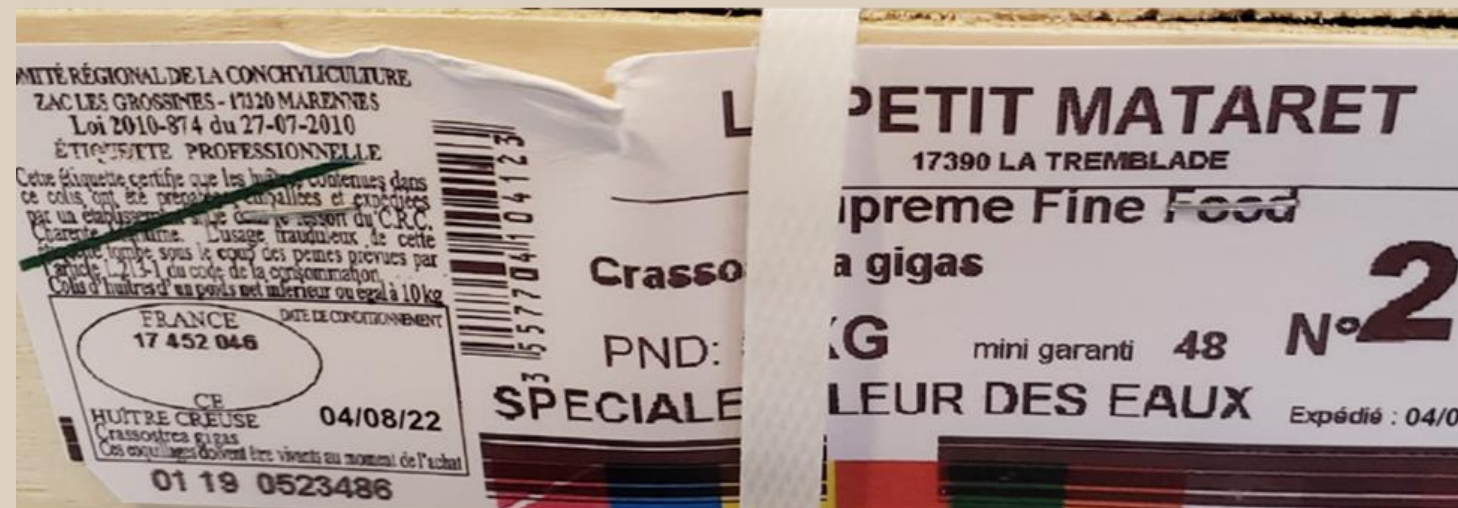


標籤

Labels

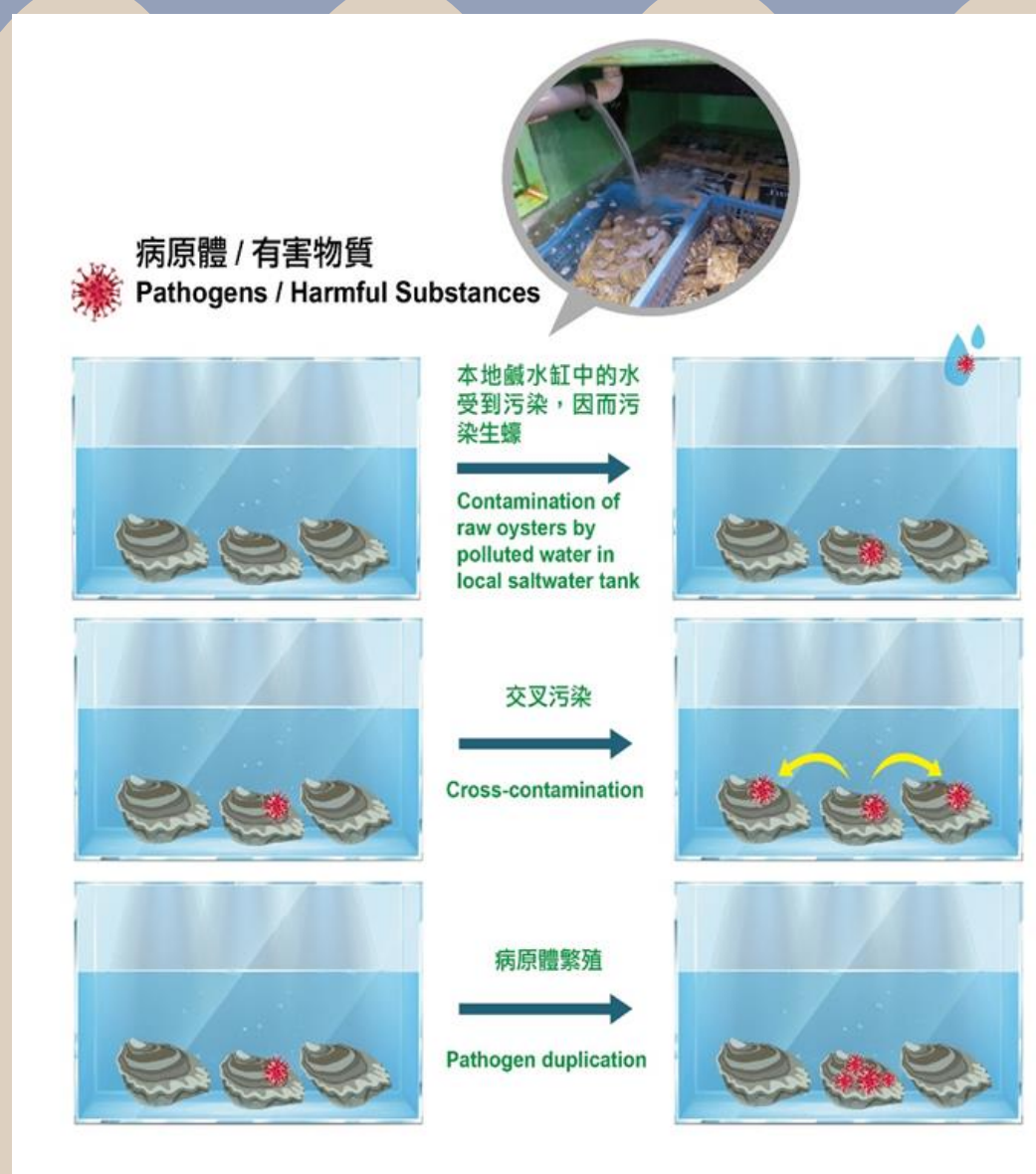


DESCRIPTION: Live Pacific Oysters (<i>Crassostrea gigas</i>)			
REG EST NO:	883	STORE:	Between 3°C and 7°C
LEASE NUMBER:	255	CLASSIFICATION:	Approved
GROWING AREA:	Boomer Bay	DATE PACKED:	7/07/2022
DATE HARVESTED:	6/07/2022	NET CONTENTS:	18.05 kg - 15 doz
STANDARD:	PACK NO: 3 - 6		



以水存養

Wet Storage



不應以水存養進口生蠔

Not to re-immense imported oysters in water for storage

貯存

Storage



Temperature Control Check Sheet

	month				refrigerator no.				
	1 Sign	2 Sign	3 Sign	4 Sign	5 Sign	6 Sign	7 Sign	8 Sign	
10:30	✓	✓	✓	✓	✓	✓	✓	✓	
15:00	✓	✓	✓	✓	✓	✓	✓	✓	
20:00	✓	✓	✓	✓	✓	✓	✓	✓	
10:30	9 Sign	10 Sign	11 Sign	12 Sign	13 Sign	14 Sign	15 Sign		
15:00	✓	✓	✓	✓	✓	✓	✓		
20:00	✓	✓	✓	✓	✓	✓	✓		

Temperature standard: Chiller: 0-5°C, Freezer: -18°C

貯存

Storage



處理和製備

Handling and preparation



指定區域和設備

Designated area and equipment



展示與供應

Display and serving



展示與供應

Display and Serving



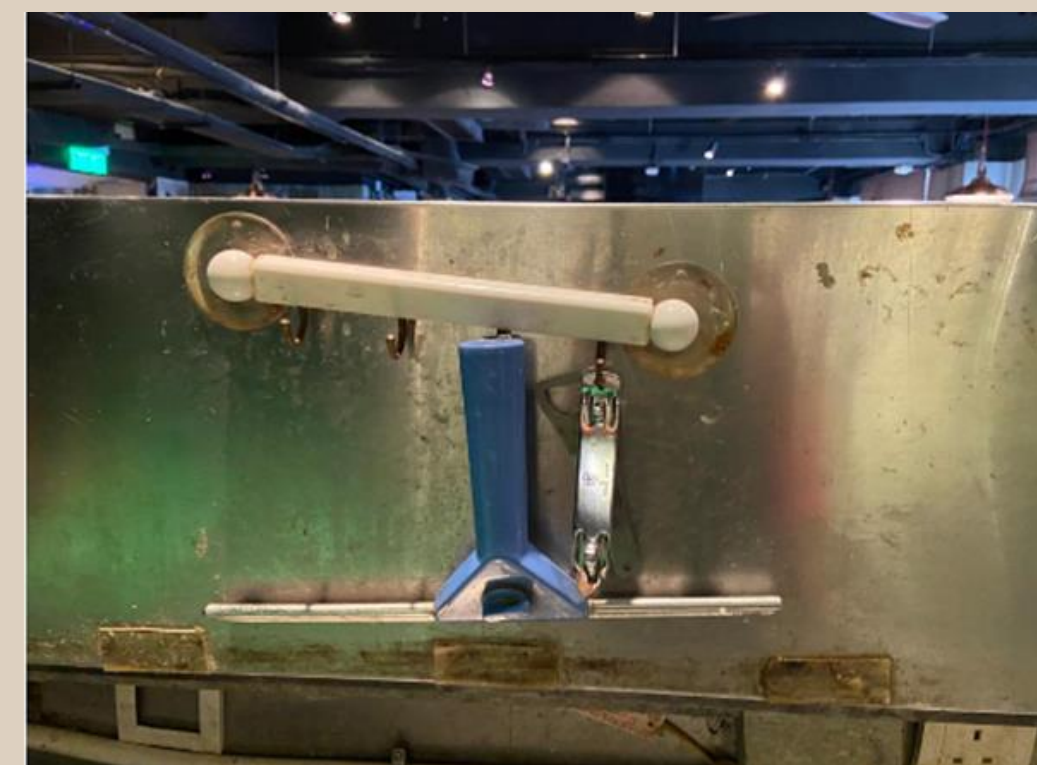
送遞

Delivery



環境衛生

Environmental hygiene



健康提示

Health reminders



雖然不完全是高風險食物資訊，一些食肆亦有為消費者提供一些健康提示。

Although not exactly a high-risk food advisory, some restaurants are providing some health reminders for consumers.



保持個人衛生

Maintain personal hygiene

- 食物經營者須確保員工保持良好的個人衛生：
 - 勤洗手
 - 清潔和消毒用具、設備和工作區域

Food business operators must ensure that their staff maintain proper personal hygiene:

- Wash hands frequently
- Clean and disinfect utensils, equipment and working area



避免交叉污染

Avoid cross-contamination

- 生蠔應存放在指定的雪櫃
- 不要與其他食物混合
- 使用單獨的設備處理以避免和其他食物交叉污染
- 不可以水存養！

- Raw oysters should be stored at a designated refrigerator
- do not mix with other foods
- Handle with separate equipment to avoid cross-contamination of other foods
- No wet storage!



安全溫度

Safe temperature

- 食物處理人員應將生蠔保持在安全溫度
 - ➔ 活蠔:攝氏2-4度
 - ➔ 急凍蠔:攝氏-18度或以下
- 使處理過程盡可能簡短
- 只應要求才去殼

- Food handlers should keep raw oysters at safe temperatures
 - ➔ Live oysters: 2-4°C
 - ➔ Frozen raw oysters: $\leq -18^{\circ}\text{C}$
- Make the handling process as brief as feasible
- Shuck oysters only upon request



消費者忠告

Consumer advice

- 建議食物業在餐牌或產品包裝上提供消費者建議，提醒消費者生吃蠔的風險，以保護高危人群免受食源性疾病的侵害。

- Food businesses are advised to provide consumer advice on the menu or product package alerting consumers of the risks of consuming raw oysters to safeguard susceptible individuals from foodborne diseases.

* 注意：食用生或未煮熟的食物，可增加患上食源性疾病的風險，尤其是孕婦、嬰幼兒、長者和免疫力弱人士。

* Note: Consuming raw or undercooked foods may increase the risk of foodborne illness, especially for pregnant women, infants, young children, the elderly and people with weakened immunity.

業界對指引的意見

Comments from trade on the guidelines

- 邀請包括受訪者在內的食物業對指引提供意見
- 總的來說，他們非常同意/同意：
- 內容清晰易懂。
- 了解更多關於生蠔的風險。
- 會與同事分享信息。
- 有信心能按指引建議處理生蠔。
- 但有少數人反映他們可能無法完全控制送遞過程。

「供生吃的蠔 - 給食物業的食物安全指引」的意見調查 Survey on Comments about 'Oysters Intended for Raw Consumption - the Food Safety Guidelines for Food Businesses'

II. 對指引內容的意見 Comments on content the guidelines

	完全不同意 Strongly disagree	不同意 Disagree	普通 Neutral	同意 Agree	非常同意 Strongly agree
1. 內容清晰易懂。 The content of is clear and easy to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 看完後，我了解更多關於生蠔的風險。 After reading, I have learnt more about the risk of raw oysters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 我學到了更多關於安全處理生蠔的方法。 I have learnt more about safe handling of raw oysters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 我會與我的同事分享指引的信息。 I would share the information of the guidelines with my colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- Invited trade including interviewees to comment on the draft guidelines
- In general, they strongly agreed/agreed that:
- the content is clear and easy to understand.
- they had learnt more about the risk of raw oysters.
- They would share the information with their co-workers.
- They were confident that they could handle oysters as recommended in the guidelines.
- Only a few reflected that they might not have full control of the delivery process.

回應業界意見

Response to trade's comments

第三方送遞商與食物送遞

有時食物業經營者會使用第三方送遞商來配送生蠔，而這些送遞商有責任遵從上述食品安全建議。

有關保持送貨車輛和送貨員衛生的更多詳情，請參閱我們關於外賣和送餐的食物安全建議。掃描二維碼閱讀更多：



Third-party delivery agents and food delivery

Third-party delivery agents are sometimes used to deliver raw oysters. These agents are responsible for adhering to the food safety advices outlined above.

For further details on maintaining hygiene of food delivery, please refer to our **food safety advice on takeaways and meal delivery**. Scan the QR code to read more:

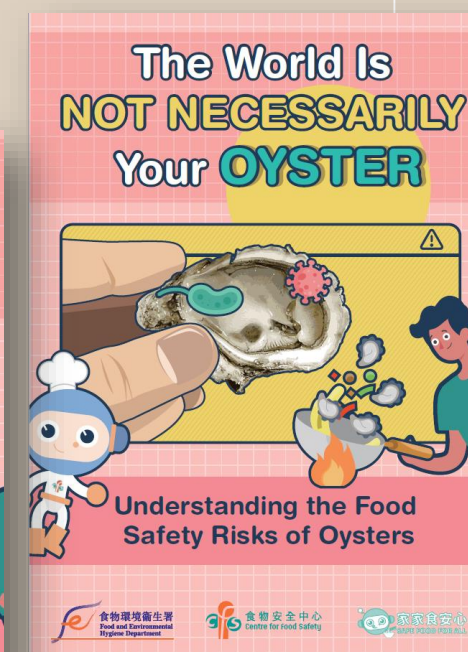


對公眾的宣傳及教育

Promotion and education to the public

- 業界人士亦建議，食安中心亦應向公眾提供有關生蠔的食物安全風險的資訊。
- 內容根據食安中心的消費者調查結果草擬，以協助市民採取必要的預防措施，避免食物中毒，並作出知情的選擇。

- Trade members also suggested that public should also be provided with information on the food safety risks of oysters.
- Content was drafted based on the findings of a CFS's consumer survey to help the public to take necessary precautions to avoid food poisoning and make informed choices.



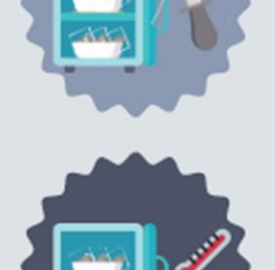
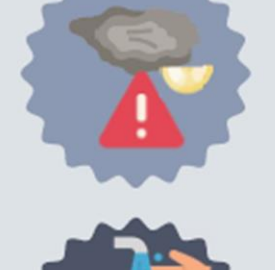
總結

- 生蠔很容易受可導致食源性疾病（食物中毒）的有害微生物和具有抗藥性的「超級細菌」污染。
- 生或未煮熟的蠔是高風險食物，因為在食用前沒有經過熱處理或熱處理不足，未能消滅食源性致病菌或「超級細菌」。雖然所有生蠔都可能導致食源性疾病，但有些生蠔被認為風險更大，不建議生吃。
- 食物業經營者必須確保其員工保持良好個人衛生，並定期及在需要時清潔和消毒用具、設備和工作區域。
- 生蠔應存放在指定的雪櫃內，並使用不同的工具處理，以免與其他食物交叉污染。
- 食物處理人員應將生蠔保持在安全溫度，處理過程盡可能縮短，並因應要求才去殼。
- 食物業界可在餐牌或產品包裝上提供食用忠告，提醒消費者食用生蠔的風險，以保護高危人士免受食源性疾病的侵害。



Summary

- Oysters are easily contaminated by harmful microorganisms that can cause foodborne diseases (food poisoning) and "superbugs" with antimicrobial resistance.
- Raw or undercooked oysters are high-risk food, as there is no or insufficient heat treatment to kill foodborne pathogens or "superbugs" before eating. While all are at stake of causing foodborne diseases, some oysters are deemed riskier and not recommended to be eaten raw.
- Food business operators must ensure that their staff maintain good personal hygiene and that their utensils, equipment and working area are cleaned and disinfected regularly and as needed.
- Raw oysters should be stored in a designated refrigerator and handled with separate equipment to avoid cross-contamination with other foods.
- Food handlers should keep raw oysters at safe temperatures, make the handling process as brief as feasible, and shuck oysters only upon request.
- Food businesses are advised to provide consumer advice on the menu or product package alerting consumers of the risks of consuming raw oysters to safeguard susceptible individuals from foodborne diseases.



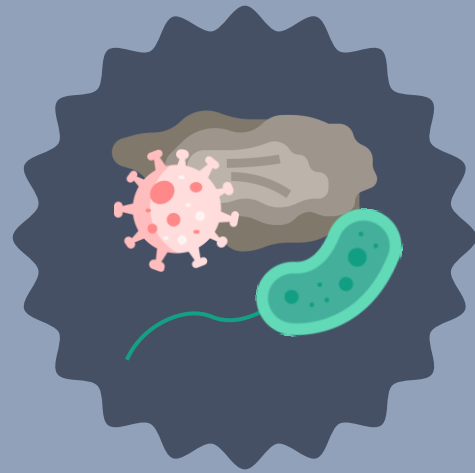
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More information

- 請瀏覽 www.cfs.gov.hk/oyster

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Thank you



謝謝

