

# Oysters

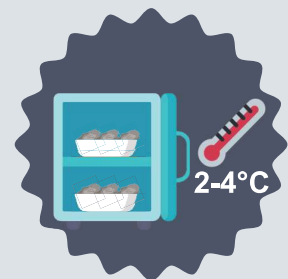
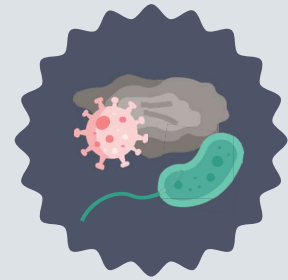
Intended for Raw Consumption

Food Safety Guidelines for Food Businesses



# In a nutshell

- 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.





# Introduction and scope

Oysters consume food by filtering water, which contains chemicals or microorganisms that the oysters can absorb. Raw or undercooked oysters are **high-risk foods** because there is **no or insufficient heat treatment** to kill pathogens that cause foodborne diseases (food poisoning). People who consume contaminated oysters raw or undercooked may become ill. Pregnant women, infants, young children, the elderly, and people with weakened immunity\* are particularly at a higher risk of developing complications. For the sake of food safety, oysters should be thoroughly cooked before consumption, and susceptible individuals should avoid eating raw or undercooked raw oysters.

While eating raw oysters carries inherent risks, there is still often a need to strike a balance between food safety and some people's preference for eating oysters raw. This set of guidelines is designed for food businesses that prepare and sell oysters, including those intended for raw consumption. The guidelines aim to assist the food industry in understanding the risks associated with raw oysters and implementing food safety measures in their operations to reduce foodborne illnesses while also allowing susceptible groups of consumers to make informed choices.

The guidelines include Good Hygiene Practices for food businesses to reduce the risk of raw oyster contamination in the course of purchase, receiving, storage, preparation and delivery, plus safe oyster cooking methods. These procedures, however, may not be allowed in certain food establishments, as they are restricted by the conditions/requirements of licences/permits issued by the Food and Environmental Hygiene Department (FEHD). Food businesses should **refer to and comply with the conditions/requirements specified by their relevant licences/permits, where applicable**, when using the guidelines.

\* People with weakened immunity include but are not limited to those with chronic diseases such as diabetes, liver or kidney diseases, patients infected with HIV/AIDS, patients undergoing organ transplants, patients undergoing chemotherapy or radiation therapy, or patients taking medications such as antibiotics, antacids, etc.

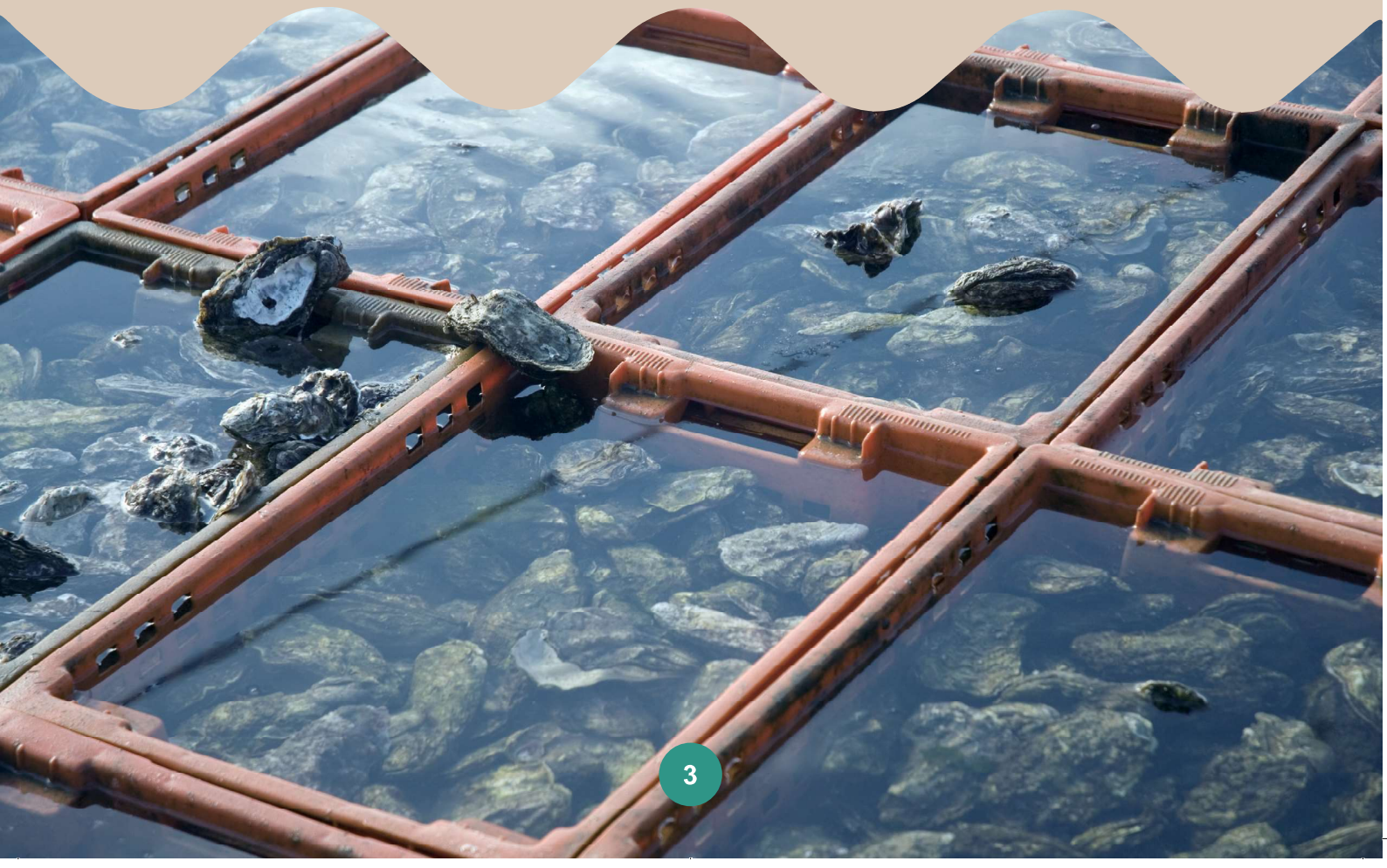


# Raw oysters and food safety risk



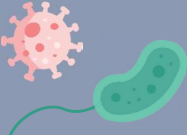



Oysters are filter feeders. They constantly draw in water and accumulate materials from water, including pathogens such as bacteria (e.g. *Vibrio parahaemolyticus* and *Vibrio vulnificus*) and viruses (e.g. norovirus and hepatitis A virus). These pathogens can continue to grow in oysters after harvesting if oysters are not maintained at sufficiently low temperatures from harvest through to consumption.

Handling and serving live oysters is different from other ready-to-eat foods as they are live animals. **Oysters should stay alive** until they are being served.





The risks and preventive measures concerning raw oysters can be summarised below:

Risks	Types	Common symptoms	Preventive measures
<b>Pathogens</b> 	<ul style="list-style-type: none"> <li>● <i>Vibrio parahaemolyticus</i>, <i>Vibrio cholerae</i> (O1 and O139), <i>Vibrio vulnificus</i></li> </ul>	Gastroenteritis characterised by diarrhoea, vomiting, etc. People with liver disease, diabetes or suppressed immune system are more at risk for its severe complications like septicaemia.	Five Keys to Food Safety, including cooking oysters thoroughly
	<ul style="list-style-type: none"> <li>● Norovirus</li> </ul>	Gastroenteritis characterised by diarrhoea, vomiting, nausea and abdominal cramps as well as headache and low-grade fever.	
	<ul style="list-style-type: none"> <li>● Hepatitis A and E viruses</li> </ul>	An abrupt onset of fever, malaise, anorexia, nausea, abdominal pain, dark urine and jaundice, which is more severe in susceptible populations.	
<b>Natural toxins</b> 	<ul style="list-style-type: none"> <li>● Marine biotoxins</li> </ul>	Intoxication including diarrhoeic, paralytic and neurotoxic shellfish poisoning which cause gastrointestinal and/or neurological problems such as abdominal pain, diarrhoea, tingling and numbness, etc.	Avoid overindulgence in oysters and maintain a balanced diet
<b>Chemical contaminants</b> 	<ul style="list-style-type: none"> <li>● Persistent organic pollutants (POPs) such as dioxins</li> </ul>	Adverse effects depend on the nature of individual POP, amount and duration of exposure. Possible health effects include potentially disrupting immune and reproductive systems and diminishing intelligence.	Avoid overindulgence in oysters and maintain a balanced diet
	<ul style="list-style-type: none"> <li>● Heavy metals (e.g. Cadmium)</li> </ul>	Acute toxicity of cadmium due to dietary exposure is very unlikely. However, kidney functions may be affected with chronic intake.	
<b>Physical hazards</b> 	<ul style="list-style-type: none"> <li>● Sharp edges of oyster shells and cracks of shells resulting from opening oysters</li> </ul>	Injury; there is a possibility of infecting <i>Vibrio vulnificus</i> (commonly known as ‘flesh-eating bacteria’) in oysters through wounds.	Dress wounds properly and use gloves before handling oysters

# Oysters in shells and shucked oysters

There are two types of oysters available on the market: in shell and shucked, which are preserved in a chilled or frozen state.



Frozen oysters




Chilled oysters pre-shucked at origin



Live in-shell oysters

Different types of oysters present different potential food safety risks depending on where they are grown and how they are handled. Despite the inherent risks, some people may still choose to eat oysters raw. While all are at stake of causing foodborne infections, some oysters are deemed riskier and should not be consumed raw. To this end, the CFS adopts a risk-based principle and draws the following recommendations for specific types of oysters:

	To be eaten after cooking	To be eaten raw	Remarks
Live in-shell oysters intended for raw consumption	✓	✓	<ul style="list-style-type: none"> <li>Thorough cooking is the most effective way to reduce the risk of foodborne illness.</li> </ul>
Chilled oysters that need to be cooked before eating	✓	✗	<ul style="list-style-type: none"> <li>Raw oysters may be caught or grown in waters contaminated with disease-causing microorganisms.</li> </ul>
Chilled oysters pre-shucked at origin 	✓	✗	<ul style="list-style-type: none"> <li>Raw oysters die immediately after being shelled, and are prone to spoilage, especially when there is improper temperature control during long-haul transportation.</li> <li>Physical and microbiological contamination may occur during shucking.</li> </ul>



Oysters frozen at origin intended for raw consumption (cannot be further processed and frozen in Hong Kong)	✔	✔	<ul style="list-style-type: none"> <li>● Only thaw frozen oysters in the refrigerator;</li> <li>● Thorough cooking is the most effective way to reduce the risk of foodborne illness.</li> </ul>
Frozen oysters to be cooked before eating	✔	✘	<ul style="list-style-type: none"> <li>● Raw oysters may be contaminated with microorganisms.</li> <li>● Oysters should be safely thawed in the refrigerator at 0°C to 4°C, in running cold water, or in the microwave.</li> <li>● Do not thaw at room temperature.</li> </ul>
Locally grown oysters	✔	✘	<ul style="list-style-type: none"> <li>● Due to the pollution of Hong Kong waters, locally farmed oysters are prone to bacterial and viral contamination.</li> <li>● Additional purification is still not effective in removing pathogens such as norovirus.</li> </ul>

Legends: ✔ Yes ✘ No



# Safe practices for selling and serving of raw oysters



Where oysters are eaten raw, the main food safety controls will be implemented at places of oyster farming and post-harvest processing such as purification. On the other hand, the downstream of food supply chain, which includes import, wholesale, retail, and catering services, plays an equally important role in reducing the food safety risk of oysters.

Apart from compliance with relevant licensing conditions, food businesses that sell raw oysters should adhere to the following best practices during all steps of purchasing, receiving, storing, handling, preparing, displaying, cooking, delivering, and keeping record of oysters. Food businesses are responsible for ensuring that their employees maintain good personal hygiene and keep the premises clean.





# 1 Purchase

- Purchase oysters intended for raw consumption (either live in-shell oysters or frozen oysters) from reputable and hygienic suppliers.
- Choose imported raw oysters with health certificates issued by the competent authority of the exporting country and acceptable to the Director of Food and Environmental Hygiene.
- Learn about the logistics of raw oysters from suppliers, including oyster storage and cold chain management. Do not choose suppliers that keep oysters intended for raw consumption in wet storage as this risks contamination of oysters.
- Plan ahead the consumption amounts and storage space for raw oysters before purchase.

Export Health Certificate

Ministry Serial Number: \_\_\_\_\_  
Consignee Name and Address: \_\_\_\_\_  
Harvest Date: \_\_\_\_\_  
Harvest Area: \_\_\_\_\_  
Ministry Receipt Number: \_\_\_\_\_  
Product Name: \_\_\_\_\_ Quantity: \_\_\_\_\_  
Total Oysters: \_\_\_\_\_  
Place of Distribution: \_\_\_\_\_ Party Name: \_\_\_\_\_  
Export Name and Address: \_\_\_\_\_

This is to certify that the above consignment was inspected on 03/12/2022 and found fit for human consumption.

Current License No: \_\_\_\_\_  
Issued by (Office): \_\_\_\_\_  
Expiry date of License: \_\_\_\_\_

THIS CERTIFICATE IS ONLY VALID FOR THE ABOVE NAMED ARTICLE(S)

CHIEF PORT HEALTH INSPECTOR  
Port Health Authority



## Wet storage increases risk of contamination

Wet storage refers to the practice of storing live shellfish temporarily by submerging them under water or heavy spraying. The Codex Alimentarius specifies that live bivalve molluscs **must not be re-immersed in or sprayed with water after they have been packaged and left the distribution centre.**

Re-immersion can adversely affect the end-product specifications of raw oysters:

- The temperature of the saltwater tank is usually not low enough to suppress bacterial growth
- Mixing of raw oysters from different batches in the same water tank facilitates cross-contamination between shellstocks.
- Raw oysters undergoing wet storage may not be comparable with the food standards endorsed by the health certificate and recognised by the authorities of exporting countries as fit for human consumption.



Instead of prolonging the shelf-life of oysters intended for direct consumption by wet storage, food businesses should store them at **a controlled, uninterrupted cold chain** for the shortest time possible to secure food safety.

## Receiving 2

- Ensure that oysters are received at a safe temperature and in a hygienic condition:
  - Live oysters are kept at **4°C or below**.
  - Frozen oysters are kept at **-18°C or below**.
- Use a portable, hand-held infrared thermometer to check the surface temperatures of incoming raw oysters.
- Only accept live oysters that are clean with intact shells and without abnormal odour. When the shell is tapped, it should be tightly shut.
- Identify and keep the label or tag which allows product tracking and tracing in each batch of raw oysters.
- Check that the delivery vehicle is clean and that the oysters have not been mixed with raw seafood or stored at inappropriate temperatures or under unsanitary conditions.
- Record each delivery of oysters, including any rejected batches, in a log book, along with the receiving temperature and batch details retrieved from the label or tag. Note the reason for rejection if a batch is rejected. Please see Appendix 1 for a sample log sheet.



Live oysters  $\leq 4^{\circ}\text{C}$

Frozen oysters  $\leq -18^{\circ}\text{C}$



## Storage 3

- Keep all live oysters in a designated refrigerator separately from other food items at temperature at **2°C - 4°C<sup>†</sup>**. Frozen oysters should be kept in a designated freezer separately from other food items kept at **-18°C or below**.
- Store oysters in separate containers according to their variety and batch, and label them with the date of receipt and the variety of the oysters.



<sup>†</sup> While temperatures above 4°C facilitates bacterial growth, extremely low temperatures might kill the live oysters. Consider a storage temperature between 2°C and 4°C when refrigerating live oysters.



- When refrigerating live oysters:
  - Fill an open top container halfway with edible ice. Live oysters can be suffocated if they are sealed up. Do not wash live oysters only until shucking.
  - Place oysters on the ice bed with the curved side down to keep them alive by retaining fluid in the shells.
  - Wet a clean, thin kitchen cloth using cold potable water, and ring out excess water. Place the cloth over the oysters to retain moisture during refrigeration.
  - Keep oysters between **2°C and 4°C for at most two days**. If keeping the oysters for longer than two days is expected, freeze them. Live oysters frozen in such a way cannot be eaten raw, and should be cooked before consumption.
- Wash oysters only before shucking.
- Store shucked oysters separately from the unshucked ones to prevent cross-contamination.
- Apply the first-in-first-out principle for storage and serving of raw oysters.
- **Do not re-immers**e oysters intended for raw consumption in water as the practice risks contamination.
- Use an appliance thermometer or an infrared thermometer to check the temperature of the fridge.



## 4 Handling and preparation

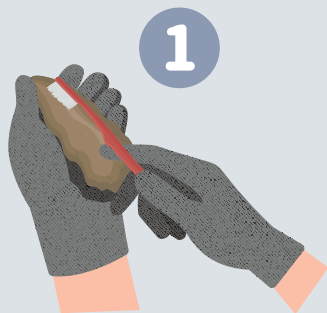
### Protective gears and equipment

- Wash hands thoroughly and put on protective gloves before handling the oysters.
- Wipe the utensils and equipment used for oyster preparation with clean and sterile towels if necessary. As an alternative, disposable paper towels may be used.
- Use only designated equipment for handling oysters. The equipment should be labelled “oysters eaten raw only” (生吃蠔專用) in both Chinese and English and kept separately from other equipment.



## Shucking

- Wash the shells of oysters thoroughly before shucking:
  - Run oysters through cold potable water in a colander.
  - Scrub the shells with a clean brush as needed to remove any dirt or debris.
  - Wash in a designated sink to prevent cross-contamination with other foods.
- Shuck oysters with care:



Run oysters through cold potable water in a designated sink and scrub as needed.



Hold the oyster in your non-dominant hand and use your dominant hand to hold a shucking knife. Wear a protective glove on the hand that is holding the oyster. Alternatively, you can use a clean folded towel to hold the oysters.



When held, the oyster's flatter top should face up and the hinge should be seen. Insert a clean shucking knife into the hinge end and carefully jiggle it to lift the top shell.



Run the knife along the inside of the top shell to cut the muscle attaching the oysters to the shell. Discard the top shell.



Run the knife underneath the oyster to detach it from the bottom shell. The oyster is now ready to be eaten raw or to be cooked.



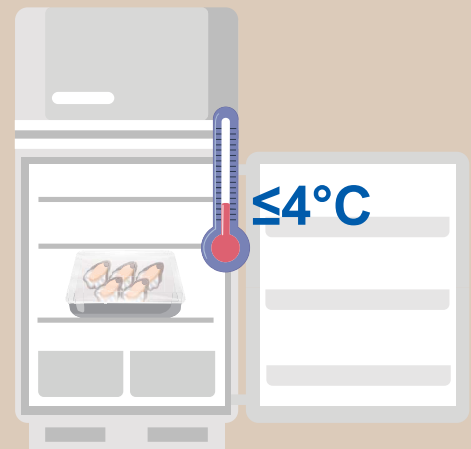
For oysters to be eaten raw, serve them in half shell on crushed edible ice. Otherwise refrigerate them **at 4°C or below and use within a day.**

- Keep the washing and shucking process as brief as feasible as it is normally performed at room temperature.
- Discard oysters with open shells before shucking, dead oysters and those with slimy surface, in dripping state or of dull colour.
- Once shucked, place half-shell oysters **on crushed edible ice** and **serve immediately**. Otherwise refrigerate them at **4°C or below** and **use within a day**. Cover them with cling film before refrigeration and separate them from other food items.
- Do not reuse oyster shells to serve any oysters to be eaten raw.



## Defrosting

- Always defrost oysters **in a refrigerator**:
  - Place oysters on a sheet pan on a single layer, with the curved side downwards. Cover the pan with cling film and place it into the fridge at **4°C or below**.
  - Defrost oysters in a designated refrigerator to separate them from other food items.
  - Defrosting can take more than a half day, so plan accordingly.
- Proceed with shucking (see P.11) if needed once the oysters are completely defrosted.



While both the microwave and running water are generally safe ways to defrost oysters that require further cooking, they are more likely to **expose raw oysters to dangerous temperatures for some time or create “hot spots” that promote bacterial growth**. Therefore, using either of these methods for defrosting oysters to be eaten raw is not recommended.





## Minimising exposure to room temperature

- Oyster handlings (e.g. rinsing, labelling, shucking, etc.), when occurring at room temperature, should not exceed one hour. The cumulative amount of time that oysters are held at room temperature before service must not exceed more than two hours.
- Oysters kept at room temperature for **longer than two hours in total must be discarded**.

Exposure to room temperature (e.g. 25°C) 		
 Less than 1 hour	 1-2 hours	 More than 2 hours
Use immediately or refrigerate 4°C	Diverted to cook products or discard	Discard

## Cooking is the most reliable method to eliminate any harmful microorganisms

To eliminate norovirus and hepatitis A from oysters, cook them to an internal temperature of **90°C for 90 seconds**. Check the internal temperature of the oyster with a probe food thermometer. Here are some suggestions for cooking times for various oyster preparation methods:

- **Boiling:** 3-5 minutes at 100°C
- **Frying:** At least 3 minutes at 190°C
- **Steaming:** 4-9 minutes at 100°C
- **Baking:** At least 10 minutes at 230°C



# Display and serving 5

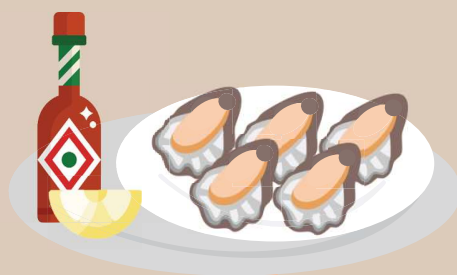
## Selling oysters at retail outlets

- Keep raw oysters at safe temperatures:
  - Live in-shell oysters at **2°C - 4°C**.
  - Frozen oysters at **-18°C or below**.
- For any front-of-house live oyster displays:
  - Place oysters on crushed edible ice, with the curved side facing downwards, to keep whole-shell oysters cold.
  - Replace ice in a timely manner and drain melted ice-water as needed.
  - Put ice below and overtop the oysters.
  - Label the oysters with their origin and variety.
  - Display smaller numbers of oysters to minimise time spent out of mechanical refrigeration.
- Ideally, shucking should take place shortly before consumption. Once shucked, oysters must be chilled at **4°C or below** and protected from contamination.
- Provide clean insulated bags, crushed edible ice and cooling gel to customers if necessary and remind them to consume the oysters as soon as possible.
- To avoid cross-contamination of oysters, the staff member responsible for shucking oysters should avoid doing other tasks such as handling cash, and maintain hand hygiene throughout the shift.
- Monitor and record temperatures of the refrigerated storage coolers where raw oysters are stored twice a day.
- Customer receipts should include information about the origin, variety and quantity of oysters purchased.



## Serving oysters at restaurants

- Shuck oysters **only** upon customer's order.
- Staff are encouraged to tell customers and list on the menu the origin and variety of the oysters they serve – this helps customers to remember what they have eaten, and therefore enables tracking and tracing in case of a foodborne disease outbreak.
- When a customer orders raw oysters and other dishes at the same time, the raw oysters should be served first and wait for the customer to finish before serving other dishes.
- Serve raw oysters over shaved or cubed ice. If servers notice the raw oyster is not consumed within 30 minutes, or when ice has melted, the best practice is to transfer oysters to a new plate with fresh ice.
- To avoid cross-contamination of oysters, the staff member responsible for shucking oysters should avoid doing other tasks such as handling cooked and ready-to-eat food, and maintain hand hygiene throughout the shift.



These oysters are from Coffin Bay, Australia.





## Serving raw oysters at a buffet or an oyster bar

- For any live oyster displays:
  - Place in-shell oysters on crushed edible ice, with the curved side downward.
  - Put ice below and overtop the oysters.
  - Replace ice in a timely manner and drain melted ice-water as needed.
  - Label the oysters with their origin and variety.
  - Display smaller numbers of oysters to minimise time spent outside of mechanical refrigeration.
- Have a staff member monitor the hygiene conditions of the displayed raw oysters.
- Ideally, shuck oysters only when the customer orders them. Otherwise, only serve shucked raw oysters in small portions and replenish as needed. Once shucked, oysters must be chilled at **4°C or below**, protected from contamination and **used within a day**.
- Provide separate tongs for customers to handle the oysters.
- Remove any remaining raw oysters at the end of business. Do not repurpose the leftovers as cooked oysters.



## Selling raw oysters online

Licensing conditions of the FEHD licence/permit require shops and online stores that sell raw oysters or other restricted food to provide information on their websites, online platform accounts, printed promotional materials, including:

- The licence/permit number and its type,
- The type of restricted food approved for sale; and
- The registered address.



# Delivery 6

- When considering shucking oysters before delivery, please follow the rule described on P.11. Ideally, shucking should take place shortly before consumption (e.g. allowing customers to shuck the oysters by themselves).
- Store oysters in sealed containers at the proper temperature to protect them against harmful microorganisms, foreign objects and cross contamination with other ingredients.
- Keep live (in-shell) oysters at temperatures between **2°C and 4°C** and shucked oysters at **4°C or below**.
- Make sure the oysters are properly packed and positioned (e.g. the curved side facing downwards) to avoid seeping and spillage, crushing of oysters or damage to food containers.
- During transportation, oysters must be separated from other food items.
- Keep records of time and temperature control for delivery items.
- Provide instructions on storage and handling (e.g. shucking) to customers, and remind them to eat the oysters as soon as possible.
- Deliverers should bring the oysters to customers by hand whenever possible. In other cases (e.g. when a customer asks for a no-contact drop-off), the oysters should be put in a designated, clean spot and confirm with the customer beforehand.



## 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:



# Personal and environmental hygiene

- Always maintain good personal hygiene:
  - Wash hands thoroughly by rubbing with liquid soap for 20 seconds before and after handling foods or after using the toilet, coughing, sneezing or touching soiled items.
  - Wear clean uniform at work.
  - Open wounds should be covered by waterproof bandages or gloves.
  - Refrain from smoking or eating during food preparation.
  - Do not use mobile phones at work.
- Food handlers should suspend work if they are suffering from or think that they are suffering from an infectious disease with symptoms such as diarrhoea, vomiting, fever, sore throat or abdominal pain.
- Clean and disinfect all equipment, utensils, working surfaces and display areas before and after use.
- Clean and disinfect the refrigerator regularly and as needed.
- Keep record of all cleaning activities.



## Cleaning vs disinfection

Food handlers should adequately clean and then disinfect food contact surfaces to efficiently eliminate disease-causing microorganisms and assure food safety.

- **Clean:** use detergents to clean surfaces and remove grease.
- **Disinfect:** use hot water (70°C for 30 seconds) or food-grade disinfectants to kill microorganisms on visibly clean surfaces
- When using a cleaning agent, leave it on the surface to be cleaned/disinfected for the retention time specified in the manufacturer's instructions.
- After cleaning/disinfection, thoroughly rinse with running water and air-dry.



# Other responsibilities of food business operators

- Comply with the conditions/requirements specified by the relevant licences/permits for the sale of oysters issued by the FEHD.
- Train food handlers before allowing them to handle raw oysters, ensuring that they understand the hygiene requirements for handling raw oysters.
- Pay attention to the CFS' press releases and trade alerts. Should there be a recall on a certain batch of oysters, stop buying or selling the affected products and follow the CFS' instructions.
- Record any customer complaints and food poisoning incidents and report to the health authority in time.
- Display consume advice as appropriate.



## Consumer advice

Raw oysters contain intrinsic microbiological risks. To allow susceptible groups of consumers to make informed food choices, food businesses are advised to put a consumer advice on menu boards, brochures, signage, food labels and placards if suitable.



The following is an example of consumer advice:

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.

- Develop a food safety plan following the principles of a Hazard Analysis and Critical Control Points (HACCP) system. For food businesses dealing with raw oysters, developing an HACCP-based food safety plan to assure the safety and quality of food products is recommended.



## HACCP-based food safety plan



An HACCP-based food safety plan identifies and addresses potential risks associated with oyster handling. The food safety plan involves documentation and checking of the production flow, namely receiving, storage, preparation and display/serving, ensuring the effectiveness of safety control measures and, therefore, reducing foodborne illness instances at food premises. Please see [Appendix 2](#) for an example of HACCP-based food safety plan.





# Appendix 2.

## Example of HACCP-based food safety plan for a food premises selling oysters intended for raw consumption

Points requiring extra attention	Monitoring steps	Monitoring frequency and methods	Critical limits	Corrective action(s) on deviations
<b>Step 1 – Receiving oysters</b>				
Product inspection – oysters from valid source	<ul style="list-style-type: none"> <li>Product must be from approved source: health certificate received for each batch of oysters</li> </ul>	<ul style="list-style-type: none"> <li>Check documents of every container of delivery</li> </ul>	<ul style="list-style-type: none"> <li>Oyster labels and valid health certificates</li> </ul>	<ul style="list-style-type: none"> <li>Reject any batch without oyster labels or invoice receipt with traceable harvest area information</li> <li>Record in receiving log</li> </ul>
Product inspection – good quality	<ul style="list-style-type: none"> <li>Accept only clean, alive oysters with undamaged shells</li> </ul>	<ul style="list-style-type: none"> <li>Every container of delivery</li> <li>Visual check</li> </ul>	<ul style="list-style-type: none"> <li>Oysters should be alive</li> </ul>	<ul style="list-style-type: none"> <li>Discard dead oysters</li> <li>Record in receiving log</li> </ul>
Temperature on receipt	<ul style="list-style-type: none"> <li>Oysters must be received in ice and refrigerated at temperatures at or below 4°C</li> </ul>	<ul style="list-style-type: none"> <li>Every container of delivery</li> <li>Check temperature with thermometer</li> </ul>	<ul style="list-style-type: none"> <li>≤4°C</li> </ul>	<ul style="list-style-type: none"> <li>Reject lots in melted ice or above 4°C</li> <li>Record in receiving log</li> </ul>
<b>Step 2 – Storage of oysters</b>				
Storage Temperature	<ul style="list-style-type: none"> <li>Keep live oysters at 2°C to 4°C</li> <li>Keep shucked oysters at or below 4°C</li> </ul>	<ul style="list-style-type: none"> <li>Daily with thermometer</li> </ul>	<ul style="list-style-type: none"> <li>Live oysters 2°C-4°C</li> <li>Shucked oysters ≤4°C</li> </ul>	<ul style="list-style-type: none"> <li>Adjust temperatures immediately</li> <li>Hold and evaluate based on time and exposure</li> <li>Record cooler temperature on daily record sheet and identify the cause of issue and rectify</li> </ul>
Storage condition	<ul style="list-style-type: none"> <li>Keep oysters in containers in a designated refrigerator or a separated compartment of the refrigerator</li> <li>Each storage container should contain only one variety of oysters and be labelled</li> </ul>	<ul style="list-style-type: none"> <li>Daily visual check</li> </ul>	<ul style="list-style-type: none"> <li>Oysters in clean labelled container with no other food in the same compartment</li> </ul>	<ul style="list-style-type: none"> <li>Reorganise for separate storage</li> <li>Discard contaminated products</li> </ul>
<b>Step 3 – Preparation of oysters</b>				
Check oysters during cleaning and shucking	<ul style="list-style-type: none"> <li>Use only fresh, live oysters</li> <li>Use only potable water to wash shells</li> <li>Use only clean and sanitized utensils to shuck oysters</li> </ul>	<ul style="list-style-type: none"> <li>Check that shells are closed, or close when tapped before shucking</li> </ul>	<ul style="list-style-type: none"> <li>Oysters should be alive</li> </ul>	<ul style="list-style-type: none"> <li>Discard dead oysters</li> </ul>
Handling time at room temperature	<ul style="list-style-type: none"> <li>Minimise time out of temperature control before service to customers</li> <li>Do not hold oysters at room temperature for longer than 60 minutes</li> <li>Prepare oysters to order</li> </ul>	<ul style="list-style-type: none"> <li>Each time oysters are removed from refrigerator</li> </ul>	<ul style="list-style-type: none"> <li>&lt;60 minutes totally</li> </ul>	<ul style="list-style-type: none"> <li>If held at room temperature for &gt;60 minutes, divert to cooked product or discard</li> </ul>
<b>Step 4 – Display / serving of oysters</b>				
Display and holding temperature	<ul style="list-style-type: none"> <li>Oysters must be displayed (or held) in refrigerators or in ice display cold enough to maintain product at or below 4°C</li> </ul>	<ul style="list-style-type: none"> <li>For product on ice:                             <ul style="list-style-type: none"> <li>Check ice visually every 2 hours or as required</li> </ul> </li> <li>For products in refrigerator:                             <ul style="list-style-type: none"> <li>Check temperature daily with thermometer</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>In edible ice or ≤4°C</li> </ul>	<ul style="list-style-type: none"> <li>Divert to cooked product or discard</li> </ul>

- Food businesses should assign staff to monitor the critical limits and keep records.
- Management staff should examine the records regularly.

