

# 製作非熱食甜品的 食物安全措施

## Food Safety Advice on Producing Non-Hot Served Sweet Food



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## 引言

甜品是很多香港人的至愛。香港中西文化共冶一爐，林林總總的甜品在這裡都大受歡迎。

## 一般製作流程及食物安全問題

雖然有些甜品以熱食為主，但有更多是冷吃的。這些非熱食的甜品一般都是預先做好，食用前不用翻熱的。甜品長時間貯存在室溫下，很容易滋生微生物，增加了食物安全的風險。



除了溫度控制的問題外，一些非熱食甜品在烹煮後還須加上忌廉和新鮮水果等極容易腐壞的配料。在處理食物期間，配製人員手上的細菌如金黃葡萄球菌等亦有可能污染食物，影響食物安全。

這套指引主要是針對那些非熱食，並且涉及以下一項或多項風險因素的甜品：

- 包含了非常容易腐壞的配料；
- 煮好後還須人手處理和混入其他配料；以及
- 在食用前的貯存溫度不當。

下文將探討確保食物安全的一般原則，然後再以三種非熱食的甜品為例詳加說明：

1. 水果甜品
2. 忌廉甜品，例如班戟或忌廉蛋糕
3. 冷吃的中式/泰式糕點

## Introduction

**Sweet foods are for sweet tooth.** In Hong Kong, a melting pot of Eastern and Western cultures, desserts (or so called sweet foods) of various kinds are popular.

## Common Production Modes and food safety problem

Although some sweet foods are generally hot served, a great variety of them are considered non-hot served, which means they are probably prepared in advance and do not require reheating before consumption. Prolonged storage of sweet foods under room temperature favours the growth of microorganisms which increases food safety risk.

Besides the issue of temperature control, some non-hot served sweet foods involve post-cooking food handling with cream and fresh fruits that are highly perishable ingredients. During food handling, bacteria such as *Staphylococcus aureus* found on hands may cross-contaminate the food, which also increases food safety risk.

In this set of guidelines, the focus is on those sweet foods which are not generally hot served and associated with one or more of the following risk factors:

- a. Highly perishable ingredients;
- b. Post-cooking handling involves manual handling and mixing with other ingredients; and
- c. Improper holding temperature before consumption.

**Below is a discussion of the general principles, followed by practical illustrations with three non-hot served sweet foods:**

1. Dessert with fruit
2. Dessert with cream, e.g. pancake or cream cake
3. Chilled Chinese/Thai puddings



## 潛在危害與風險

製作甜品的潛在危害及控制措施示例

危害來源	有關食物/步驟	危害種類	控制措施
配料	水果	細菌、霉菌	<ul style="list-style-type: none"> <li>光顧持牌/認可的可靠供應商</li> <li>查核供應商的品質規格</li> </ul>
	忌廉	細菌滋生	
	豆類、麵粉	細菌、霉菌	
製作過程	貯存	細菌滋生	<ul style="list-style-type: none"> <li>把配料貯存在適當的溫度下，並妥為蓋好</li> </ul>
	配製	細菌滋生	<ul style="list-style-type: none"> <li>保持良好個人衛生</li> <li>使用不同的用具分開處理生的食物和熟食/即食食物</li> <li>每次使用後把用具/設備消毒</li> <li>把破損或表面有瘀傷的水果扔掉</li> <li>把果汁/已削皮切好的水果蓋好並放進雪櫃</li> </ul>
	烹煮	細菌存活	<ul style="list-style-type: none"> <li>徹底煮熟</li> </ul>
烹煮後的處理過程	貯存	細菌滋生	<ul style="list-style-type: none"> <li>避免長時間放在室溫下</li> </ul>
	混合/分切/裝入容器	細菌交叉污染	<ul style="list-style-type: none"> <li>劃分不同的區域分開處理生的食物和熟食/即食食物，並使用不同的用具</li> <li>食物處理人員保持良好個人衛生</li> </ul>
	運輸	送貨車輛裡有異物或化學物，造成污染	<ul style="list-style-type: none"> <li>檢查送貨車輛</li> </ul>
細菌滋生		<ul style="list-style-type: none"> <li>把食物貯存在攝氏4度或以下的保溫箱內</li> </ul>	

## Potential Hazards and Risks

Examples of potential hazards and their control measures in sweet food production.

Source of hazards	Related food/ steps	Nature of hazards	Control Measures
Ingredients	fruits	Bacteria, mold	<ul style="list-style-type: none"> <li>Buy from licensed/approved suppliers which are reliable</li> <li>Check suppliers' quality specification</li> </ul>
	cream	Bacterial growth	
	Bean, flour	Bacteria, mold	
Food processing steps	Storage	Bacterial growth	<ul style="list-style-type: none"> <li>Store ingredients at appropriate temperature and well covered.</li> </ul>
	Preparation	Bacterial growth	<ul style="list-style-type: none"> <li>Follow strict personal hygiene</li> <li>Use separate equipment for handling cooked or ready to eat food and raw food</li> <li>Sanitize utensils/equipments after each use</li> <li>Discard fruits that are damaged or bruised</li> <li>Cover and refrigerate cut fruits/juice immediately after peeling or cutting.</li> </ul>
	Cooking	Survival of bacteria	<ul style="list-style-type: none"> <li>Cook thoroughly</li> </ul>
Post cooking handling	Storage	Bacterial growth	<ul style="list-style-type: none"> <li>Avoid prolonged storage at room temperature</li> </ul>
	Mixing/ Cutting/ Filling	Bacterial cross contamination	<ul style="list-style-type: none"> <li>Establish separate zones and use separate utensils to handle raw and cooked or ready to eat food</li> <li>Food handlers maintain good personal hygiene</li> </ul>
	Transportation	Foreign bodies or chemical contamination inside delivery vehicle	<ul style="list-style-type: none"> <li>Inspect delivery vehicle</li> </ul>
Bacterial growth		<ul style="list-style-type: none"> <li>Store food in insulated containers at 4°C or below</li> </ul>	

## 確保食物安全的一般原則

食物安全重點控制系統(HACCP)可有效提高食物安全，預防由食物傳播的疾病。食肆負責人應按照該系統的原則，在食物製作過程中採取適當的措施，把各種危害帶來的風險減到最低。

防止發生食物事故的先決條件是，在整個配製及處理過程中，一直保持良好的個人和環境衛生。為避免交叉污染，配製食物的地方、設施、設備及所有接觸食物的表面均須經常消毒，保持清潔。食物處理人員應保持良好個人衛生，以免身上會引致食物中毒的微生物污染食物。此外，食肆應執行蟲害控制、廢物處理和員工培訓等基本工作。

食肆經營者可參考之前出版的業界指引中各種製作甜品的食物安全措施，在日常運作中應用“食物安全五要點”。

([http://www.cfs.gov.hk/english/food\\_leg/files/Guidelines\\_on\\_Safe\\_Production\\_of\\_Sweet\\_Food\\_e.pdf](http://www.cfs.gov.hk/english/food_leg/files/Guidelines_on_Safe_Production_of_Sweet_Food_e.pdf)

[http://www.cfs.gov.hk/tc\\_chi/food\\_leg/files/Guidelines\\_on\\_Safe\\_Production\\_of\\_Sweet\\_Food\\_c.pdf](http://www.cfs.gov.hk/tc_chi/food_leg/files/Guidelines_on_Safe_Production_of_Sweet_Food_c.pdf)).



## 運送甜品的注意事項

由於連鎖食肆的經營模式有變以及地方有限，甜品的部分製作工序已改在食物工場完成，然後才把製成的甜品運送至食肆或零售點出售，因此運送途中的溫度控制對確保食物安全十分重要。送貨車輛的衛生狀況和適當的貯存溫度是確保甜品安全的關鍵。運送甜品的車輛或容器不潔或不符合規格，都有可能造成污染。如運送途中貯存甜品的溫度不當，容易滋生致病菌，風險則更大。針對以上情況，我們特別制定了以下運送甜品的指引：

- 運送甜品的車廂在途中應密封，以免甜品受到塵埃/垢物/廢氣所污染。
- 載貨車廂的內壁必須平滑和不透水，並經常清潔和消毒。冷凍食物如忌廉蛋糕等，最好用有冷凍裝置的車輛運送。
- 每次送貨前檢查車輛的衛生情況。
- 車輛除運送甜品外，不應用作運送其他東西，特別是生的食物或化學品等。為此，應保存送貨記錄以作檢查。
- 運送前和到達後各檢查溫度一次，確保冷吃甜品的貯存溫度一直保持在攝氏4度或以下。
- 把忌廉蛋糕等食物放在清潔乾淨的容器裏蓋好，或把非預先包裝的食物包好。
- 定時清潔和消毒(視乎需要)容器。

## General principles to safeguard food safety

Since Hazard Analysis and Critical Control Point (HACCP) system can effectively enhance food safety and prevent foodborne diseases, operators should implement appropriate measures to minimize the risks associated with the hazards. Application of HACCP principles during routine operations can reduce the risks.

As a pre-requisite, good personal and environmental hygiene during all preparation and handling processes are essential to prevent outbreak of food incidents. To avoid cross contamination, food preparation areas, facilities, equipment and all food contact surfaces should always be sanitized and kept clean. Food handlers should maintain a high standard of personal hygiene in order to avoid transferring food poisoning micro-organism to food. Furthermore, other basic works, such as pest control, waste disposal and staff training should also be in place.

Caterers may refer to the previously published trade guidelines on food safety measures for preparing sweet food by practicing the 5 Keys to Food Safety in the daily operation.

([http://www.cfs.gov.hk/english/food\\_leg/files/Guidelines\\_on\\_Safe\\_Production\\_of\\_Sweet\\_Food\\_e.pdf](http://www.cfs.gov.hk/english/food_leg/files/Guidelines_on_Safe_Production_of_Sweet_Food_e.pdf)

[http://www.cfs.gov.hk/tc\\_chi/food\\_leg/files/Guidelines\\_on\\_Safe\\_Production\\_of\\_Sweet\\_Food\\_c.pdf](http://www.cfs.gov.hk/tc_chi/food_leg/files/Guidelines_on_Safe_Production_of_Sweet_Food_c.pdf)).


## Supplementary notes on transportation

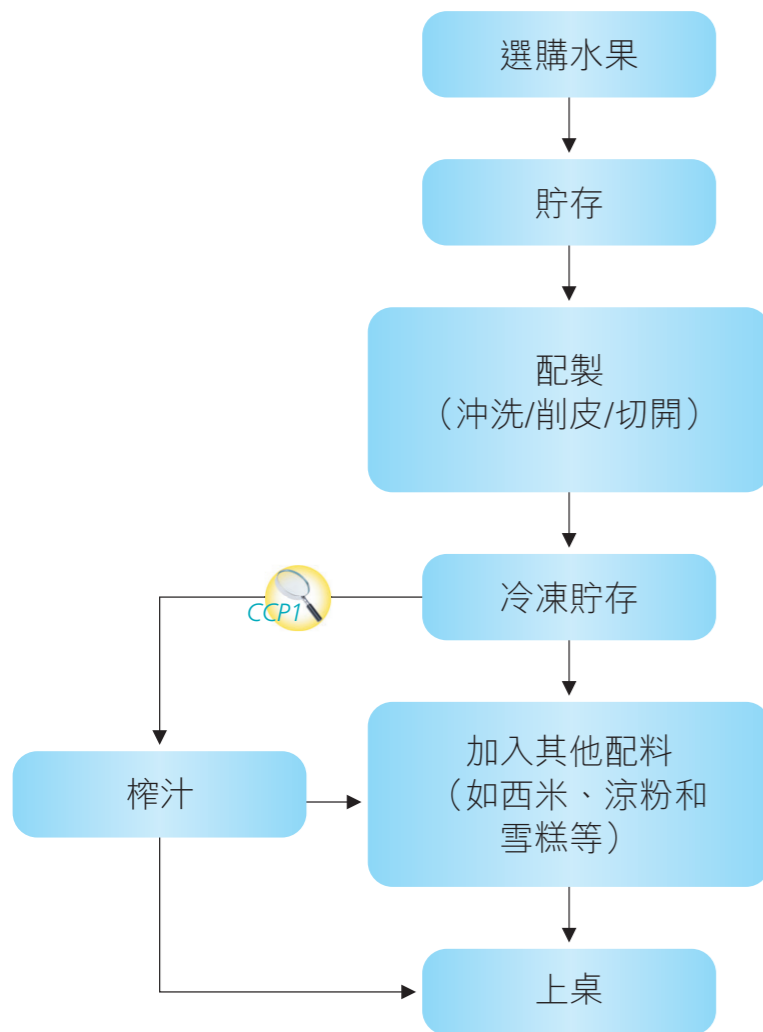
Due to the evolution of chained food outlets and limited space in the catering establishment, some steps in sweet food production are carried out in food factory and subsequently delivered


to the restaurants or outlets for retail sale. Temperature control during transportation is an important food safety issue. Hygienic condition inside the delivery vehicles and maintenance of proper holding temperature are crucial to ensure safe sweet food production. Contamination may occur if sweet food is carried in dirty or inappropriate containers or vehicles. Further risk is introduced if they are transported under ambient temperature that encourages growth of pathogenic bacteria. The following supplementary guidelines are developed for the steps of transportation:

- During transportation, sweet food should be carried in enclosed vehicles to protect it against contamination by dust/dirt/fumes from vehicles or traffic.
- Internal surfaces of the transporting vehicles should be smooth and impervious, and be frequently cleaned and disinfected. It is desirable to deliver cold food, such as cream cakes, by vehicles with refrigeration device.
- Inspect the hygienic condition of the vehicle before each delivery
- Transporting vehicle should not be used for purposes other than delivering sweet food, especially transportation of raw food or chemicals, and maintain delivery log for checking purpose.
- Conduct temperature checks before delivery and on arrival to ensure cold served sweet food is kept at 4°C or below .
- Keep food such as cream cake in hygienic and covered containers or completely wrap non-packaged food.
- Clean and disinfect (where appropriate) containers regularly.

## 具體例子1. 水果甜品

以下是製作水果甜品的一般流程圖，控制重點以  標示



 切開的水果應貯存在容器內蓋好或用保鮮紙包好，並貯存在攝氏4度或以下的雪櫃裡，以防細菌滋生。

### 注意要點

#### (i) 購買水果


一般情況下，水果是不經烹煮而直接切好加在甜品上。新鮮水果可能含有致病菌(如沙門氏菌和李斯特菌)、病毒(如諾如病毒)和毒素(如霉菌毒素)，食肆負責人應確保接收的所有食物均新鮮和安全。

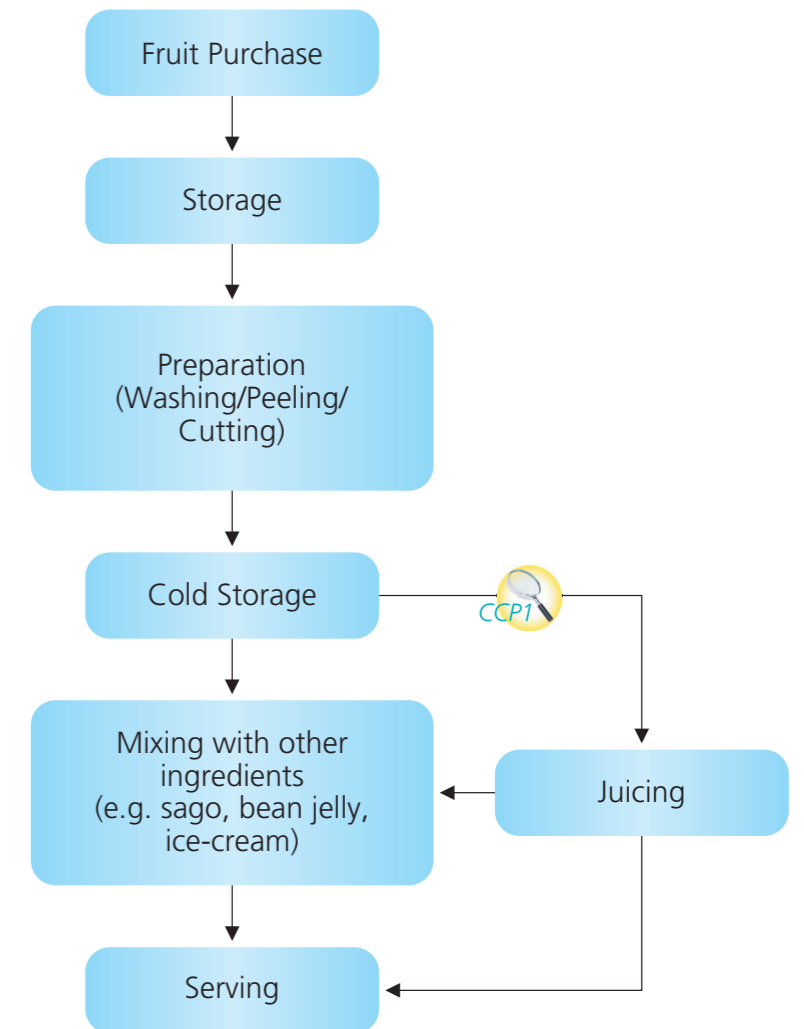
#### (ii) 配製水果


水果在與其他配料混合前，沖洗、削皮和切開等事前準備工夫是去除污垢，減少潛在表面的污染物(例如果皮上的細菌或病毒)的重要步驟。建議用乾淨的蔬果刷把蜜瓜在清水下刷洗好才切開。切開的水果應盡快使用。切水果的刀具應放在有殺菌劑的消毒器裡，以保持清潔。



## Specific example 1. Dessert with fruit

The following diagram is a generic example showing the CCPs  for production of dessert with fruit.



 Cut fruit should be stored in containers and covered by lids or cling wrap. Cut fruit should be stored inside refrigerator maintained at 4°C or below to prevent bacterial growth.

### Important points to note

#### (i) Fruit purchase


Fruits are often prepared and added to the dessert without undergoing any cooking process. Harmful bacteria such as Salmonella and Listeria species, virus such as Norovirus, toxins such as patulin may be present in fresh fruits. Caterers should ensure that all food received are fresh and safe.

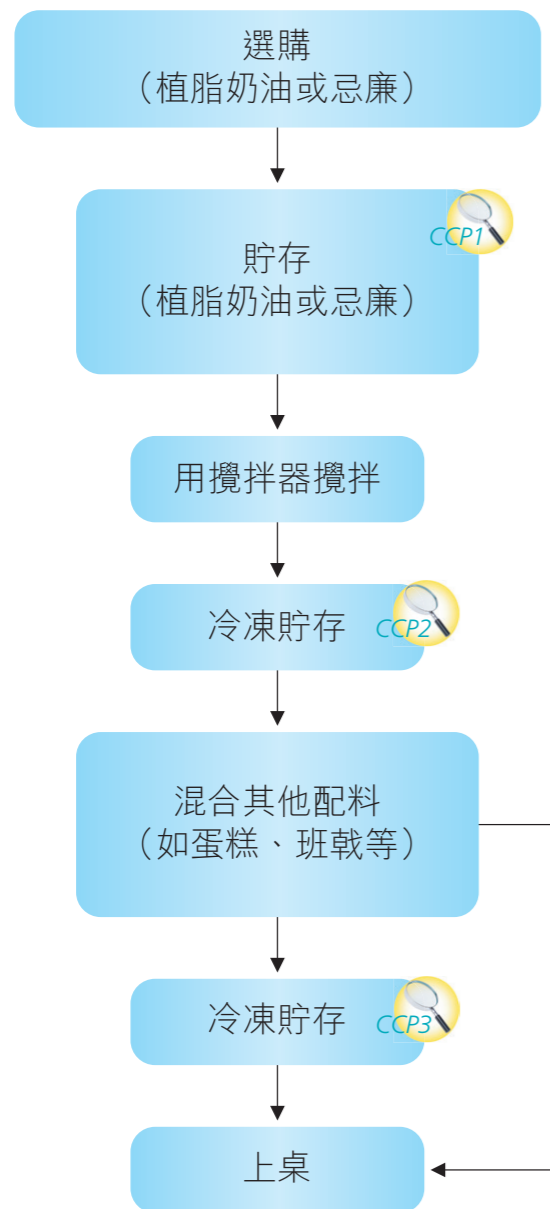
#### (ii) Preparation of fruit


On the other hand, preparation steps including washing, peeling and cutting of fruits are vital steps to remove dirt and reduce potential surface contamination, such as bacteria or virus on the skin or rind of fruits before combining with other ingredients. Whole melons are advised to be washed and scrubbed with a clean produce brush under running water before cutting. Cut fruits should be used as soon as possible. Knives for cutting fruit should be stored in knife sterilizer with bactericidal agent inside to maintain the cleanliness of the knives.





## 具體例子2. 忌廉甜品，例如班戟或忌廉蛋糕

以下是製作忌廉甜品的一般流程圖，控制重點以  標示



 **CCP1** 甜品常常會加新鮮忌廉或植脂奶油令其更加可口，但新鮮忌廉非常容易變壞，必須冷凍貯存；而植脂奶油則須貯存在陰涼乾燥的地方。因此，忌廉類配料應按照包裝上的指示妥為貯存。

 **CCP2** 已攪拌好的忌廉應貯存在攝氏4度或以下的雪櫃，處理時須分外小心。


 **CCP3** 配製好的甜品應貯存在攝氏4度或以下的雪櫃，處理時須分外小心。

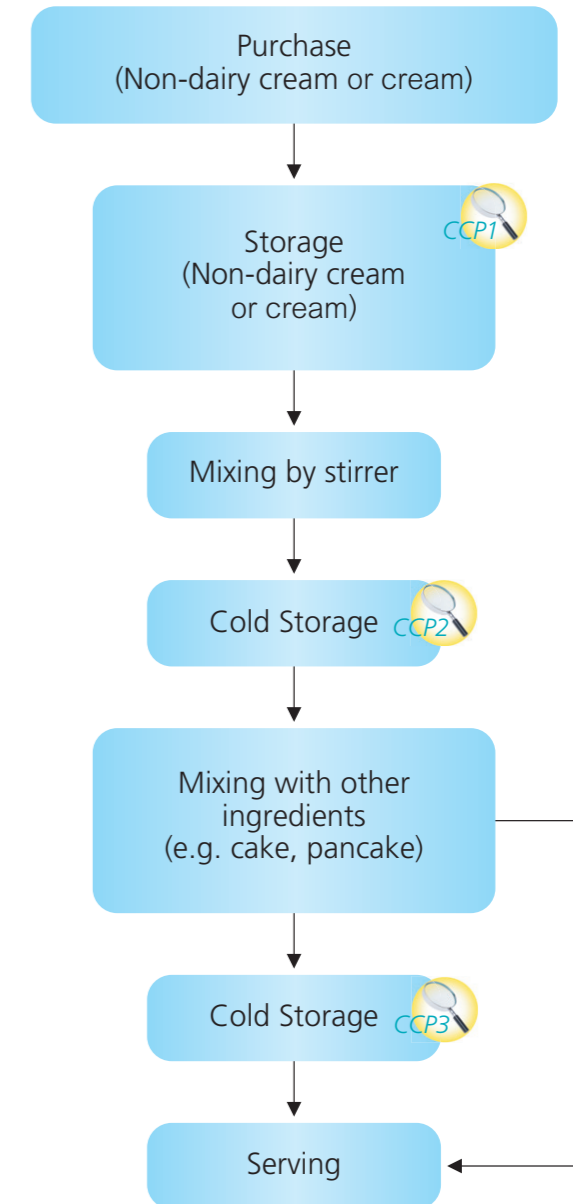
### 注意要點 攪拌忌廉


忌廉和麪糰應用不同的攪拌器攪拌，因為麪糰中加入的生雞蛋有可能受沙門氏菌污染。此外，每次使用後都要妥為清潔和消毒攪拌器。負責人應對甜品的需求量作好預算，以免製作過量的忌廉。用剩的忌廉不應再放進雪櫃留待下次使用。可以的話，在食物室較清涼的地方攪拌忌廉，而且每次只攪拌足夠一次用的分量。





## Specific example 2. Dessert with cream e.g. pancake or cream cake

The following diagram is a generic example showing the CCPs  for production of dessert with cream.



 **CCP1** Fresh cream or non-dairy cream is often added to dessert to make it more palatable. Fresh cream is a highly perishable ingredient and requires storage in refrigerated condition while non-dairy cream may be stored in cool or dry place. Hence, cream ingredients should be stored according to the package instruction.

 **CCP2** The whipped cream should be stored inside the refrigerator maintained at 4°C or below and handled with extra caution.


 **CCP3** The prepared dessert should be stored inside the refrigerator maintained at 4°C or below and handled with extra caution.

### Important point to note

#### Mixing of cream


During cream mixing, separate mixer should be used for preparing cream and dough as making of dough involves raw eggs which may have the risks of Salmonella contamination. Moreover, the mixer should be properly cleansed and sterilized after each use. Operators should estimate the demand carefully to avoid over-production of cream and should not refrigerate residual cream and use again. If feasible, the cream may be whipped in the cool area of the food room immediately before use.

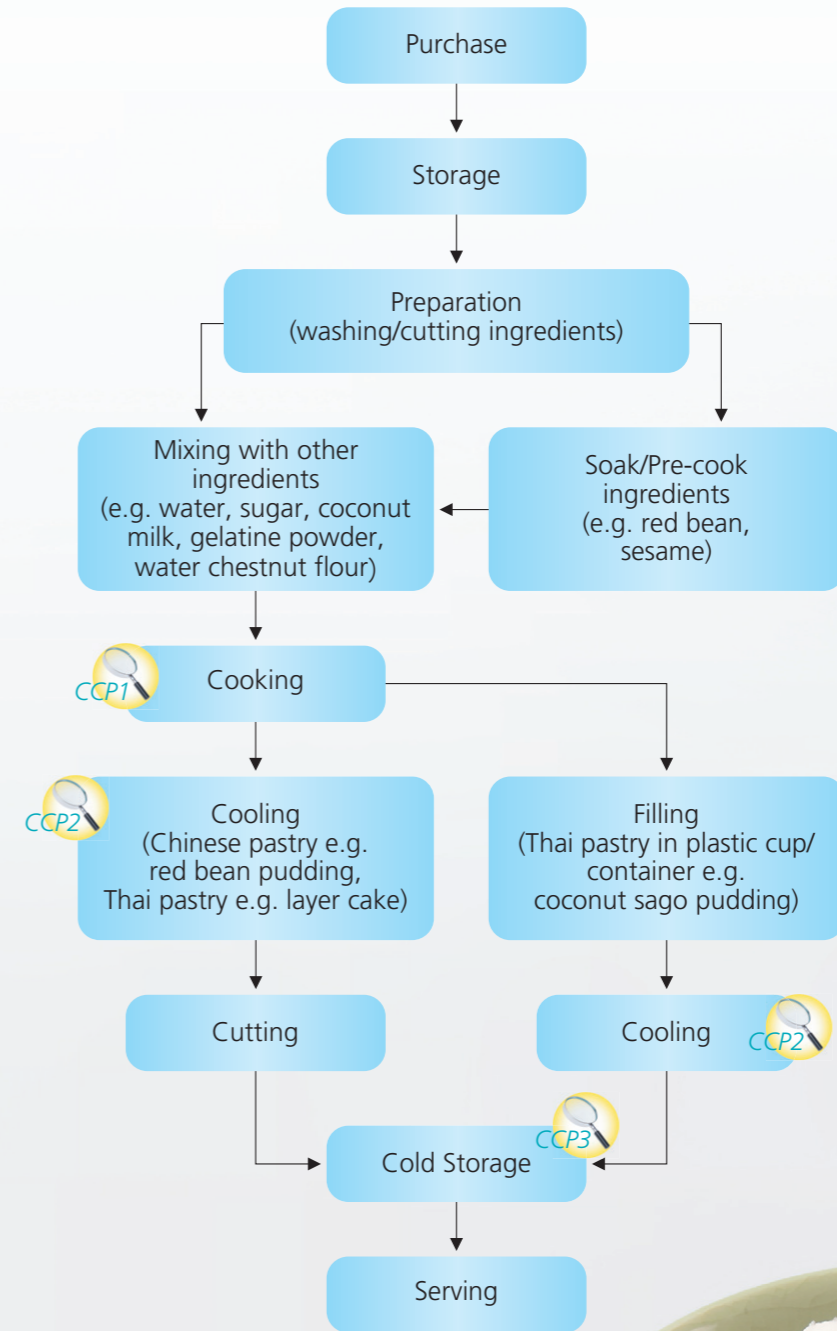
### 具體例子3. 冷吃的中式/泰式糕點

以下是製作中式/泰式糕點的一般流程圖，控制重點以  標示





### Specific example 3. Chilled Chinese/Thai puddings


The following diagram is a generic example showing the CCPs  for production of chilled Chinese/Thai pudding.







 所有配料均須徹底煮熟，以消滅致病菌。


 中式/泰式糕點一般預先製作，需時冷卻。如配料之一是豆類，部分食肆會在配製數小時前先把豆煮好。這些煮好的豆及混好的材料如在不當的溫度下長時間冷卻，細菌(如產氣莢膜梭狀芽胞桿菌)的孢子會發芽，並繁殖至危險水平，可引致食物中毒。因此，食肆負責人應避免長時間把食物放在室溫下冷卻。食物烹煮後應在環境衛生的食物室內盡快冷卻。

 配製好的甜品應貯存在攝氏4度或以下的雪櫃，處理時須分外小心。



 All ingredients should be cooked thoroughly to kill the pathogenic bacteria.

 Chinese/Thai puddings are often produced well in advance and involved cooling process. If beans are used as ingredients, some caterers choose to boil the beans several hours ahead of the time of preparation. The beans, together with the mix, if cooled improperly in a prolonged period of time, allows the spores of bacteria e.g. Clostridium perfringens to multiply and germinate to a level that may cause food poisoning. To overcome the problem, caterers should avoid prolonged cooling of food at room temperature. Cooling should be conducted rapidly after cooking inside food room where environmental hygiene is better controlled.

 The prepared dessert should be stored inside the refrigerator maintained at 4°C or below and handled with extra caution.



**食物安全中心**

風險傳達組

二零一三年八月

Risk Communication Section

**Centre for Food Safety**

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