

非熱食雞肉食品的生物質素

MICROBIOLOGICAL QUALITY OF NON-HOT SERVED DISHES WITH CHICKEN MEAT

09 2023

引言

INTRODUCTION

雞肉一直以來是本地很多非熱食即食食品的常見配料，而近年有相當多店鋪售賣外賣手撕雞和切雞

Chicken meat has been a common ingredient in many local non-hot served ready-to-eat dishes, and there are quite a number of shops selling takeaway shredded chicken and chopped chicken in recent years

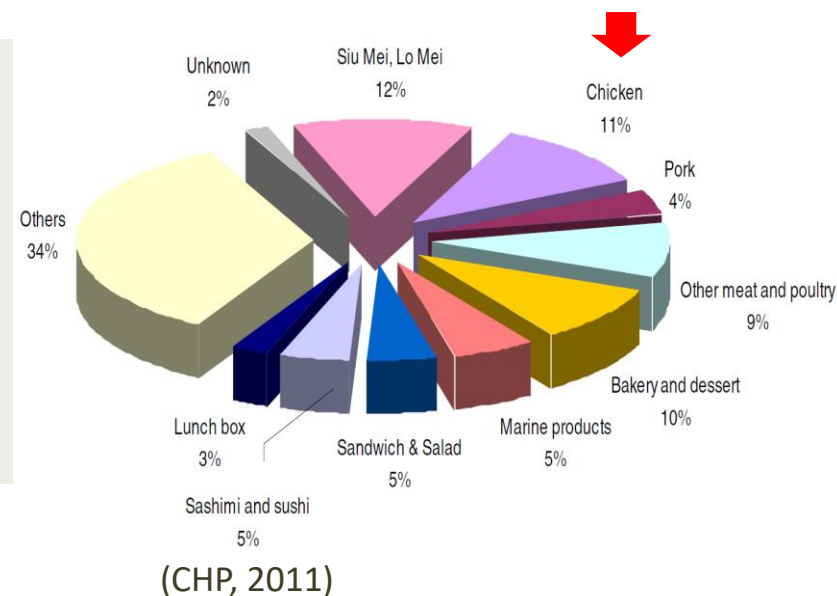


潛在微生物風險

POTENTIAL MICROBIOLOGICAL RISK

- ▶ 為了保持肉質鮮嫩，雞隻或只會烹煮至剛熟，未必能完全殺死所有致病菌(例如沙門氏菌類)
- ▶ 煮熟的雞隻通常要再經人手處理程序，如食物處理人員不遵守“良好衛生規範”，食物或會受致病菌(例如金黃葡萄球菌)污染
- ▶ 這些菜式在奉客前通常需經冷卻，如貯存期間的溫度過高，便可能會令致病菌滋長

- ▶ Chicken may only be cooked just done for tenderness, and it may not be able to completely kill all pathogens (e.g. *Salmonella* species)
- ▶ Cooked chicken is usually further processed manually; post-cooking contamination with pathogens (e.g. *Staphylococcus aureus*) may result if food handlers do not observe Good Hygienic Practices (GHPs)
- ▶ Cooling is usually required before serving, improper storage temperature during storage of the dishes may allow the growth of pathogens



金黃葡萄球菌
S. aureus



研究目的

OBJECTIVE

評估這些在本地市場有售的食品(尤其烹煮後可能須以人手處理雞肉作配料的食品)的微生物質素

To assess the microbiological quality of these products available in the local market, especially those containing chicken ingredients that are likely to be subject to manual handling after cooking



研究方法

METHODOLOGY

在2022年9月至11月期間，中心收集了100個非熱食雞肉食品樣本

Between Sep and Nov, 100 samples of non-hot served chicken meat dishes were collected

區域 Region	樣本數目 No. of Samples		總數 Total
	外賣店或攤檔 Takeaway shop or stall	食肆 Restaurant	
香港島 Hong Kong Island	10	21	31
九龍 Kowloon	12	26	38
新界 New Territories	17	14	31
總數 Total	39	61	100



樣本種類

SAMPLE TYPES

分開雞肉進行測試

Chicken meats were separated for testing

種類 Type	例子 Examples	數目 Number
手撕雞 Shredded chicken	Shredded chicken(手撕雞)	40
切雞 Chopped chicken	Chicken with chili sauce (口水雞) Hainan chicken (海南雞) Drunken chicken (醉雞)	40
手撕雞菜式 Shredded chicken dishes	Cold noodle with shredded chicken (雞絲涼麵) Greenbean noodle with shredded chicken (雞絲粉皮/雞絲拉皮) Jellyfish with shredded chicken (雞絲海蜇) Rice with shredded chicken (手撕雞飯)	15
手撕雞沙律 Shredded chicken salad	Shredded chicken salad (手撕雞沙律) Cabbage & shredded chicken Salad (雞絲牙車快沙律) Cucumber chicken salad (青瓜雞絲沙律)	5



結果和討論

RESULTS AND DISCUSSION

微生物質素

MICROBIOLOGICAL QUALITY

指引的食物類別 Food category in the Guidelines	檢測結果 (每克樣本的菌落形成單位) Result (colony-forming unit (cfu/g))		
	滿意 Satisfactory	尚可 Borderline	不滿意 Unsatisfactory
需氧菌落計數檢測結果[攝氏30度/48小時] ACC [30°C /48 hours]			
類別 Category 5 經烹煮並冷凍，在出售或進食前經若干處理程序的食物 Cooked foods chilled but with some handling prior to sale or consumption	$<10^5$	$10^5 - <10^7$	$\geq 10^7$
類別 Category 12 新鮮水果和蔬菜、含有生的蔬菜的食品 Fresh fruit and vegetables, products containing raw vegetables	N/A	N/A	N/A
衛生指示微生物 - 大腸桿菌 Hygiene indicator organisms - <i>E. coli</i>			
	<20	$20 - \leq 10^2$	$>10^2$

根據《食品微生物含量指引》
Refers to “Microbiological Guidelines for Food”



需氧菌落計數及大腸桿菌結果

ACC and *E. coli* RESULTS

(適用樣本數目 NUMBER OF APPLICABLE SAMPLES = 95)

類別 Category	需氧菌落計數結果 (每克樣本的菌落形成單位) ACC Result (cfu/g)					
	<10 ³	10 ³ -<10 ⁴	10 ⁴ -<10 ⁵	10 ⁵ -<10 ⁶	10 ⁶ -<10 ⁷	≥10 ⁷
	滿意 Satisfactory		尚可 Borderline		不滿意 Unsatisfactory	
非熱食雞肉樣本 Non-hot served chicken meat samples	83	8	1	2	1	0

手撕雞 Shredded chicken:

1.7×10^5 cfu/g

2.4×10^5 cfu/g

沒有不滿意樣本

No unsatisfactory samples

大腸桿菌亦為尚可水平
E. coli also at borderline level:
30 cfu/g

手撕雞 Shredded chicken:

1.3×10^6 cfu/g



微生物安全

MICROBIOLOGICAL SAFETY

準則 Criterion	檢測結果(每克樣本的菌落形成單位) Result (cfu/g)		
	滿意 Satisfactory	尚可 Borderline	不滿意 (可能危害健康及/ 或不宜供人食用) Unsatisfactory: potentially injurious to health and/or unfit for human consumption
沙門氏菌屬 <i>Salmonella</i> spp.	在25克樣本中 沒有檢出 Not detected in 25g	N/A	在25克樣本中檢出 Detected in 25g
李斯特菌 <i>Listeria monocytogenes</i>	< 10	10 - ≤ 100	> 100
金黃葡萄球菌及其他凝固酶陽性葡萄球菌 <i>S. aureus</i> and other coagulase-positive staphylococci	< 20	20 - ≤10 ⁴	> 10 ⁴

所有樣本均為滿意

Samples were all found satisfactory



跟進行動

FOLLOW-UP ACTIONS

- ▶ 中心已提醒店鋪商戶在處理即食食材時須遵守良好衛生規範，避免交叉污染及細菌滋生
 - ▶ 中心已再到相關食肆抽取同一款式的食物樣本作微生物化驗，測試結果全屬滿意
-
- ▶ The vendors of the shops were reminded to follow GHPs when handling ready-to-eat ingredients to prevent cross-contamination and the growth of bacteria
 - ▶ Follow-up samples were taken from the concerned shops and the results were satisfactory



整體微生物質素

OVERALL MICROBIOLOGICAL QUALITY

- ▶ 非熱食雞肉食品的微生物質素整體令人滿意
- ▶ 到訪一些出售這些食品的商戶（包括售賣尚可質素樣本的店舖）
 - ▶ 發現食物處理人員在控制一些食物配製過程方面需要加強食物安全意識
- ▶ The overall microbiological quality of non-hot served dishes with chicken meat was found satisfactory
- ▶ Visits of some shops selling these products (Including shops selling borderline samples)
 - ▶ Identified the need to enhance the awareness of food handlers on the food safety control of some food preparation processes





味水(湯汁)*
Sauce

烹煮*
Cooking

冷卻*
Cooling

浸泡*
Soaking

存放和展示
Holding & Display

切件
Chopping

汁醬*
Dressing

淋澆
Adding

水煮雞
Poached chicken



手撕雞
Shredded chicken

解凍
Thawing

冰鮮雞
Chilled chicken

烹煮/浸煮
Cooking/
Poaching

冷卻
Cooling

即食雞隻
Ready-to-eat
chicken

運送*
Transport

冷凍雞
Frozen
chicken

手撕
Shredding

存放
Storage

混合/淋澆
Mixing/Adding

汁醬
Dressing

其他配料，例如黃瓜
Other ingredients, e.g. cucumber



*可能只適用於某些生產線
May be only included in some production lines

處理生雞肉

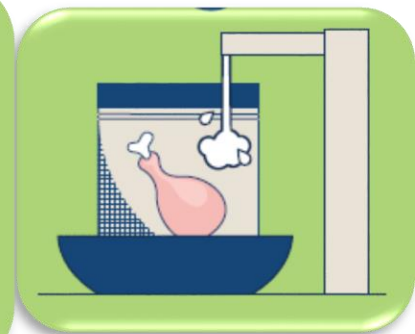
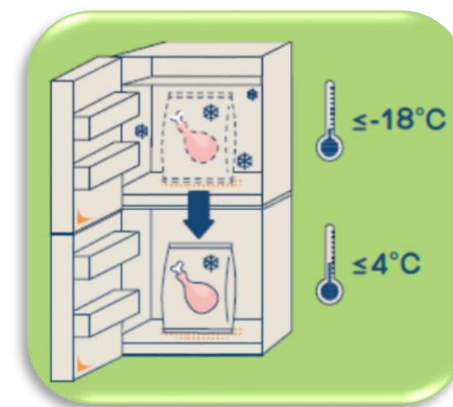
PREPARATION OF RAW CHICKEN

- ▶ 冷藏肉類如在烹煮前**未經徹底解凍**，食物內部或會因未有煮至熟透而無法消滅致病菌
 - ▶ 雞肉或會在非加熱狀態下在滾水中浸煮，**烹煮溫度過低**(配製大量食材時可能出現這種情況)，讓致病菌(如有)得以存活
 - ▶ **沒有妥善控制冷卻時間溫度**，細菌便有可能繁殖
-
- ▶ **Inadequate defrosting** of frozen meat before cooking may render its inside undercooked and unable to kill pathogens
 - ▶ Chicken meat may be cooked by soaking in boiled water with heat removed, **insufficient cooking temperature**, which may happen for larger preparation volumes, allows the survival of pathogens if present
 - ▶ **Cooling without proper time-temperature control** may allow multiplication of bacteria



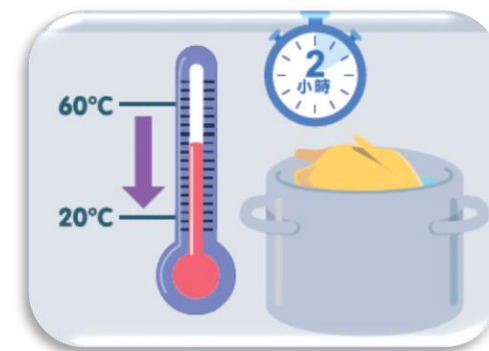
處理生雞肉

PREPARATION OF RAW CHICKEN



- ▶ **徹底解凍**：可以通過在雪櫃內存放一天或在自來水下解凍
- ▶ **烹煮溫度**：監測中心溫度以確保徹底煮熟
- ▶ **控制冷卻時間溫度**：在2小時內把溫度由 60°C 至 20°C

- ▶ **Thorough defrosting** : Can be defrosted by keeping inside a refrigerator for a day or under tap water
- ▶ **Cooking temperature** : Monitoring of internal temperature to ensure thorough cooking
- ▶ **Cooling with proper time-temperature control** : Cool cooked chicken from 60°C to 20°C within 2 hours or less



食物配製過程

FOOD PREPARATION PROCESS

- ▶ 保持良好的個人及環境衛生
 - ▶ 盡量減少交叉污染：配製和貯存可供即時食用的雞與處理生的食物(包括把冷藏肉類解凍)的地方應盡可能分隔開
 - ▶ 經手撕或斬切的雞肉食品通常放在室溫下出售，有必要採取時間控制措施，確保食物安全
-
- ▶ Observe good personal and environmental hygiene
 - ▶ **Minimise cross-contamination:** Preparation and storage areas for ready-to-eat chicken should be separated from areas for handling of raw food, including the areas for thawing frozen meat, as far as possible
 - ▶ Shredded or chopped chicken dishes are usually sold at ambient temperature, while **time control** is necessary to ensure food safety



結論

CONCLUSION

- ▶ 非熱食食品中的雞肉的微生物質素整體令人滿意
 - ▶ 由於非熱食雞肉烹煮後須經過人手處理，而且可能會存放在室溫下一段時間，因此屬於有潛在危害的食物
 - ▶ 為確保食物安全，應採取適當的時間和溫度控制措施，還應遵守良好的個人和環境衛生守則，以盡量減少交叉污染和細菌滋生
-
- ▶ The overall microbiological quality of chicken meat in non-hot served dishes was satisfactory
 - ▶ Non-hot served chicken meats are potentially hazardous food as they are subject to manual handling after cooking and may be kept under ambient condition for a period of time
 - ▶ Proper time and temperature control should be implemented to ensure food safety. Besides, good personal and environmental hygienic practices should be observed to minimise the chance of cross contaminations and the growth of bacteria

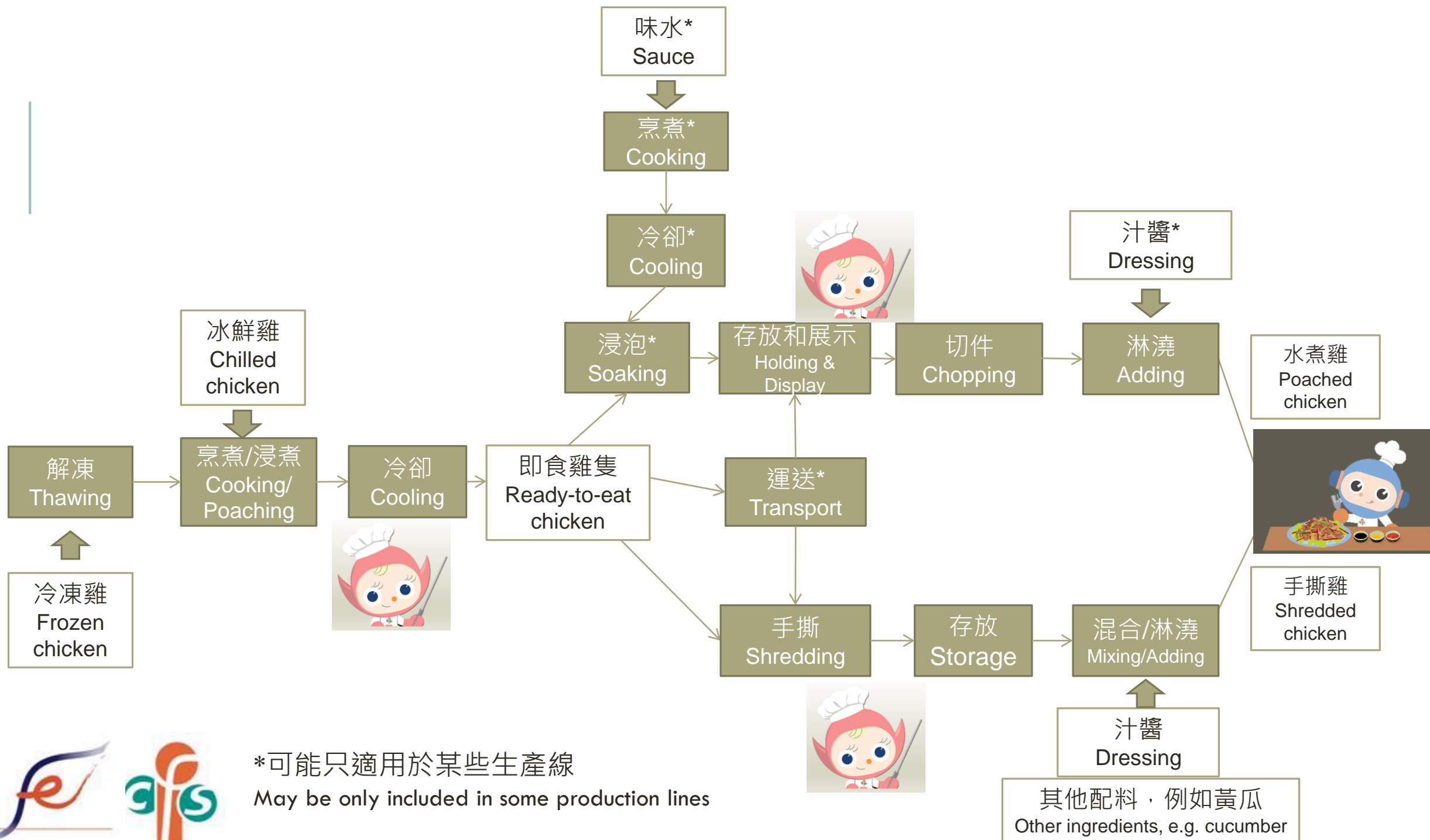


給公眾的建議

ADVICE TO PUBLIC

- ▶ 購買可供即時食用的非熱食雞肉食品後應盡早食用
 - ▶ 如非立即食用，可供即時食用的非熱食雞肉食品應以攝氏四度或以下冷藏
-
- ▶ Consume non-hot served ready-to-eat chicken dishes as soon as possible after purchase
 - ▶ Refrigerate non-hot served ready-to-eat chicken dishes at 4°C or below if it is not to be consumed immediately





給業界的建議

ADVICE TO TRADE

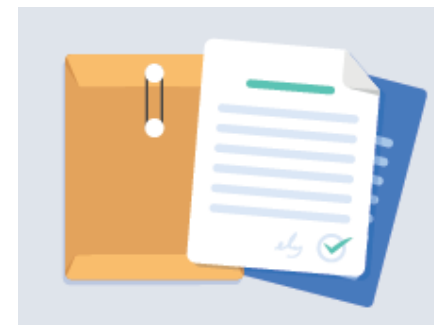


- ▶ 包裝熟雞在開封後應盡快使用
 - ▶ 包裝熟雞在開封後的保質期會縮短，尤其是雞肉會進一步處理或加工（例如用於製作手撕雞時）
 - ▶ 無論是否混合了醬汁和其他配料，在配製櫃台上只存放適量的熟雞肉。熟雞肉應加蓋並存放在攝氏4度或以下
-
- ▶ Packaged cooked chicken should be used as soon as possible, after opening
 - ▶ The shelf-life of packaged cooked chicken would be shortened after opening, especially the chicken meat is further handled or processed, e.g. when used for preparation of shredded chicken
 - ▶ Keep only appropriate amount of cooked chicken meats, no matter mixed with sauces as well as other ingredients or not, on preparation counter. Ready-to-eat chicken meats should be covered and stored at 4°C or below



給業界的建議

ADVICE TO TRADE



- ▶ 縮短沒有溫度控制下處理熟雞肉的時間，並記錄製作時間
 - ▶ 用作手撕雞的備用雞絲，應在放入雪櫃前2小時內完成由熟雞製作成雞絲的處理
 - ▶ 保留記錄並遵守時間/溫度要求，尤其是對於即食材料的處理
- ▶ Shorten the time the handling of cooked chicken meats without temperature control and keep records to indicate the duration
 - ▶ For shredded chicken prepared for later use, cooked chicken should be processed to shredded chicken within 2 hours before placing in the fridge
 - ▶ Keep records and adhere to the time/temperature requirements, especially for handling of ready-to-eat ingredients



給業界的建議

ADVICE TO TRADE

- ▶ 將製備好的雞肉食品分成小份放入雪櫃貯存，只取出所需分量使用。
 - ▶ 避免把生的食物和熟雞貯存於同一雪櫃內接近的位置，並應把生的食物置於熟雞或其他即食食物下方，以防其汁液滴下至熟食/即食食物上。
- ▶ Divide prepared chicken dishes in smaller portion for storage in the fridge and only take out portion as required
 - ▶ Storage of raw food and cooked chicken in close proximity inside the same fridge should be avoided. Raw food should be placed below cooked chicken or other ready-to-eat food in the fridge to prevent juices from dripping onto cooked/ready-to-eat food





需烹煮後處理的雞肉菜餚 (水煮雞和手撕雞適用)

給食物業的食物安全指引



Chicken Dishes with Post-cooking Handling (Applicable to Poached Chicken and Shredded chicken)

Food Safety Guidelines for the Trade



中文



English

謝謝

Thank you