食物安全焦點
Food Safety Focus

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食物環境衞生署
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本 期 內 容
IN THIS ISSUE

預製菜－我們應注意什麼？
Prepared Dishes - What Should One be Aware of?

食物安全中心風險評估組
科學主任林漢基博士報告

Reported by Dr. John LUM, Scientific Officer,
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近年，預製菜因方便快捷而越來越受歡迎。然而，大家亦開始關注預製菜相關的潛在食物安全風險。那麼，關於這類食物，我們應注意什麼？

預製菜是什麼？

預製菜泛指用一種或多種食物配料製作，經加工（如分切、混合、醃泡、搓揉、調味等）及/或配製（如煎炸、燒烤、水煮、蒸煮等）後，製成的成品或半成品菜餚。

雖然“預製菜”一詞相對較新，但其概念則不然。由溏心蛋到辣味小龍蝦等多種可歸類為預製菜的常見食物，均早已在市場上銷售。

影響預製菜食物安全風險的主要因素

原材料和製作過程

為確保預製菜的品質和安全，應使用符合本地食物安全標準的原材料。食物業界應妥為備存食物交易紀錄，以便更容易追溯源頭。

預製菜生產過程中最令人關注的是微生物污染。因此，必須確保預製菜經過適當加工處理（例如充分加熱），以有效控制成品受微生物污染的風險。

貯存和運送

由於頗多預製菜以冷凍或冷藏方式貯存，確保在整個貯存和運送過程中維持不間斷的冷鏈至關重要。冷鏈管理的目標是防止預製菜落入攝氏4至60度之間的“危險溫度範圍”內，以免細菌迅速生長。此外，預製菜的包裝應包含貯存環境和烹煮的時間、溫度及方法等資料，方便消費者參考。

預製菜的安全管理

預製菜生產商應考慮推行食物安全管理系統，例如食物安全重點控制系統，以便在生產過程的每個環節中，識別及控制食物安全問題。食物安全重點控制系統著重積極預防，事前分析各種可能產生的問題，涵蓋從生產、加工到配送及進食的所有環節。

在本港，預製菜須符合載於《公眾衞生及市政條例》（第132章）的食物安全要求。此外，根據第132章第54條的規定，所有在香港出售的食物包括預製菜，必須適宜供人食用。

現時，食物安全中心（食安中心）對在

In recent years, prepared dishes have gained popularity due to their convenience. However, concerns have been raised about their potential food safety risks. So, what should we be aware of regarding these food products?

What are Prepared Dishes?

Prepared dishes generally refer to foods which are made from one or more food ingredients and are processed (e.g., cutting, mixing, marinating, kneading, flavouring) and/or prepared (e.g., frying, roasting, boiling, steaming), and then prepared as either finished or semi-finished dishes.

While the term “prepared dishes” is relatively new, the concept is not. Many familiar food products, from soft-centred eggs to spicy crayfish, can be classified as prepared dishes and have long been available in the market.

Key Factors Affecting the Food Safety Risks of Prepared Dishes

Raw materials and manufacturing process

To ensure the quality and safety of the prepared dishes, only raw materials that meet local food safety standards should be used. Traders should maintain proper food transaction records to enhance traceability.

Microbial contamination is the major concern during the manufacturing process of prepared dishes. Therefore, it is critical to ensure that prepared dishes are processed appropriately (e.g., adequate heating) to control the microbiological risks of the final product.

Storage and transportation

Since quite a number of prepared dishes are stored refrigerated or frozen, it is important to ensure that the cold chain is well maintained during the whole storage and transportation process. The goal of the cold chain is to prevent prepared dishes from falling within the “Temperature Danger Zone” between 4°C and 60°C, which allows bacteria to grow rapidly. Lastly, the packaging of prepared dishes should include information such as storage conditions and cooking time, temperature and methods, for consumers’ easy reference.

Managing the Safety of Prepared Dishes

Manufacturers of prepared dishes should consider adopting a Food Safety Management System, such as the Hazard Analysis and Critical Control Point (HACCP) system, to identify and control food safety problems at every stage of the food production process. HACCP adopts a preventive and proactive approach to anticipate the occurrence of potential problems, which covers all stages from production and processing to distribution and consumption.

In Hong Kong, prepared dishes are subject to the food safety requirements as stipulated in the Public Health and Municipal Services Ordinance (Cap. 132). Besides, under Section 54 of the Cap. 132, all food available for sale in Hong Kong should be fit for human consumption, including prepared dishes.

Currently, the Centre for Food Safety (CFS) has implemented a risk-based surveillance system for food products available in Hong Kong,

本港出售，包括預製菜在內的食物實施以風險為本的監測方案。2023至2024年間有超過1,000個可歸類為預製菜的食物樣本接受檢測，當中只有一個可能受李斯特菌污染的預先包裝冷凍小龍蝦樣本不合格，其餘樣本測試結果均爲滿意。食安中心已就不合格的樣本採取適當的跟進行動。

including prepared dishes. In 2023-2024, over 1,000 food samples that could be classified as prepared dishes were tested, with only one unsatisfactory sample of pre-packaged chilled crayfish due to possible contamination with *Listeria monocytogenes*. Test results of the remaining samples were satisfactory. The CFS has taken appropriate follow-up actions on the unsatisfactory sample.

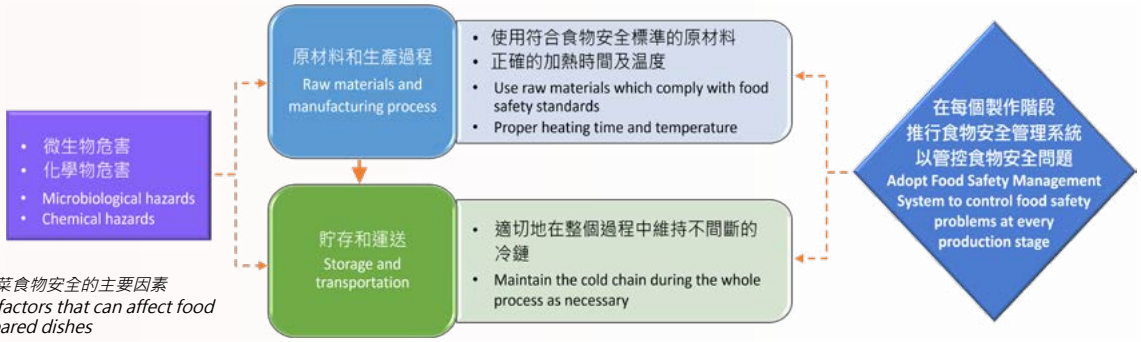

圖1: 影響預製菜食物安全的主要因素
Figure 1: Key factors that can affect food safety of prepared dishes

注意事項

- “預製菜”一詞相對較新，但其概念則不然。
- 預製菜須符合載於《公眾衞生及市政條例》（第132章）的食物安全要求。
- 原材料品質、生產過程及貯存和運送狀態是保持預製菜安全的主要因素。

給消費者的建議

- 購買前，檢查預製菜的保質期及其是否合乎衞生。
- 購買後，按照包裝上的指示貯存預製菜。
- 進食前，按照包裝上包括烹煮時間、溫度及方法等指示處理預製菜。
- 閱讀營養標簽，以選擇較健康的食物。

給業界的建議

- 從認可及可靠的來源購入原材料。
- 在生產預製菜的過程中，嚴格遵從良好衞生規範，並保持良好個人及環境衞生。
- 確保整個貯存和運送過程中維持良好的冷鏈管理。
- 包裝上應詳細列明處理食物的指示如貯存環境、烹煮時間、烹煮溫度和烹煮方法，讓消費者能正確跟隨。
- 妥善保存交易記錄，以便在有需要時追溯源頭。

Key Points to Note

- While the term “prepared dishes” is relatively new, the concept is not.
- Prepared dishes are subject to the food safety requirements as stipulated in the Public Health and Municipal Services Ordinance (Cap. 132).
- Raw material quality, manufacturing processes and storage and transportation conditions are key factors for maintaining the safety of prepared dishes.

Advice to Consumers

- Before purchasing, check expiration dates and the wholesomeness of the prepared dishes.
- After purchasing, store prepared dishes according to the instructions on the packaging.
- Before consumption, process prepared dishes according to the instructions on the packaging, including cooking time, cooking temperature, and cooking methods.
- Read nutrition labels to make healthier food choices.

Advice to Trade

- Obtain raw materials from approved and reliable sources.
- Strictly adhere to Good Hygienic Practices (GHPs), and maintain good personal and environmental hygiene in the production of prepared dishes.
- Ensure that the cold chain is well maintained during the whole storage and transportation process of prepared dishes as necessary.
- Detailed instructions for handling the products, such as storage conditions, cooking time, cooking temperature and cooking methods, should be indicated on the packaging so that consumers can follow correctly.
- Maintain proper trade records to facilitate source tracing when necessary.

認識總膳食研究：膳食攝入量估算的重要方法

Understanding Total Diet Studies: an Important Tool for Dietary Exposure Estimation

食物安全中心風險評估組
科學主任郭麗儀女士及王慧琼女士報告

Reported by Ms. Joey KWOK and Ms. Waiky WONG, Scientific Officers, Risk Assessment Section, Centre for Food Safety

總膳食研究是國際公認的有效方法，在同一次研究中便可評估全體市民從整體膳食攝入各種化學物質的分量。數十年來，聯合國糧食及農業組織（糧農組織）和世界衞生組織（世衞）一直推廣全球採用總膳食研究這種全面評估的方法。本文將闡述本港進行總膳食研究的詳細情況及在膳食攝入量評估中的價值。

香港的總膳食研究

食物安全中心（食安中心）於2010至2014年間進行了香港首個總膳食研究，現正進行香港第二次總膳食研究。總膳食研究的結果為香港的食物安全風險評估提供了科學基礎。在國際層面上，香港總膳食研究也就這地區食物中的化學物水平，以及群眾從膳食攝入這些化學物質的分量提供了寶貴數據。食安中心自 2010 年起成為世界衞生組織食物中化學物風險分析合作中心，並將持續向全球環境檢測中心

Total Diet Studies (TDS) are internationally recognised as an effective approach for estimating population dietary exposure to a broad spectrum of chemicals across the entire diet within one study. For decades, the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) have been actively promoting the global adoption of this comprehensive approach. This article elaborates on the details of the implementation of TDS in Hong Kong and their value in dietary exposure assessment.

TDS in Hong Kong

The Centre for Food Safety (CFS) conducted the First Hong Kong Total Diet Study (1st HKTDS) during 2010-2014, and is currently conducting the Second Hong Kong Total Diet Study (2nd HKTDS). The results of HKTDS provide a scientific basis for food safety risk assessment in Hong Kong. In the international context, HKTDS also provide valuable data on chemical levels in foods and the associated population dietary exposure in this region. Being a WHO Collaborating Centre for

食物污染監測及評估計劃提供從香港總膳食研究所得的相關分析數據。

建基於香港首個總膳食研究奠定的基礎及全球在總膳食研究方法的進展，香港第二次總膳食研究使用了這些經改進的技術，確保能對香港人口的膳食攝入量得出更全面和可靠的評估。值得留意的是，食安中心於 2023 年取得較年輕群組（6 至 17 歲）的食物消費量數據，讓香港第二次總膳食研究的膳食攝入量評估範圍擴展至涵蓋成年人口和較年輕人口兩個群組。

第二次總膳食研究的基本原則

第二次總膳食研究是一項大型而複雜的項目，旨在系統地評估全港人口從膳食攝入化學物質的分量。是次研究採用嚴謹的方法框架，包括：（一）根據反映典型本地飲食習慣的食物消費量數據選取具代表性的食物，並指定爲187種總膳食研究的食物；（二）在一整年內從香港各區零售處所和網上銷售平台抽取 2 244 個個別樣本；（三）使用慣常方法（如沖洗、去皮、烹煮）處理食物以模擬實際食用情況；（四）對超過130種選定的化學物質進行化驗分析工作；（五）結合化驗分析結果與食物消費量的最新數據，以進行本港人口膳食攝入量估算；及（六）把估算出的膳食攝入量與適當的健康參考值比較，以評估對公衆健康的風險。

有別於日常食物監測計劃，香港總膳食研究審視整體膳食，與食物監測計劃有以下分別：（一）涵蓋反映整體膳食的食物樣本作抽樣和化驗；（二）食物樣本處理至可食用的狀態，用以反映在廚房處理食物期間的影響，食物內化學物質含量在處理過程中或會有所增減；及（三）把個別食物樣本合併成為混合樣本作化驗分析，以減低進行分析的成本。長期來看，這些特點讓香港總膳食研究能更真實地估算本港人口從膳食攝入化學物質的分量。

第二次總膳食研究結果摘要

第二次總膳食研究的報告正在備製中，並會分階段公布。截至2025年6月，亞硫酸鹽及硝酸鹽 / 亞硝酸鹽的膳食攝入量評估結果報告已公布。

亞硫酸鹽

亞硫酸鹽具備多種功能，特別是用作防腐劑和抗氧化劑，應用於食品生產中已有悠久歷史。第二次總膳食研究的結果發現，本港人口不論是成年或較年輕群組，每日從膳食攝入亞硫酸鹽的分量，均遠低於糧農組織 / 世衛食品添加劑聯合專家委員會（糧農組織 / 世衛聯合專家委員會）訂定的每日可攝入量，顯示對健康構成影響的機會不大。

硝酸鹽和亞硝酸鹽

硝酸鹽和亞硝酸鹽是氮循環所產生的物質，在環境（包括土壤、水和空氣）中普遍存在。第二次總膳食研究的結果發現，本港整體成年人口和較年輕群組，不論是攝入量一般和攝入量高的市民每日從膳食攝入硝酸鹽的估算分量，均處於歐洲食物安全局專家組就硝酸鹽推算出的每日可攝入量範圍內，而從膳食攝入亞硝酸鹽的估算分量也低於糧農組織 / 世衛聯合專家委員會和歐洲食物安全局訂定的每日可攝入量，顯示對一般市民的健康構成即時風險的機會不大。其他來自第二次總膳食研究的報告將於2025及2026年間通過專題網頁發布。

Risk Analysis of Chemicals in Food since 2010, the CFS will continue to contribute the relevant analytical data arising from HKTDS to WHO GEMS/Food.

Building on the foundation of the 1st HKTDS and global methodological advancements in TDS, the 2nd HKTDS utilises these improved techniques to ensure a more comprehensive and reliable assessment of dietary exposure of the population in Hong Kong. Notably, with the availability of a set of food consumption data acquired for the younger population (aged 6-17) in 2023, dietary exposure assessment in the 2nd HKTDS can be extended to cover both the adult and younger populations.

Essential Principles of the 2nd HKTDS

The 2nd HKTDS is a large and complex project that systematically evaluate population-level dietary exposure to chemical substances. It employs a rigorous methodological framework comprising: (i) selection of representative foods, designated as 187 TDS food items, based on local food consumption data that reflect typical dietary patterns; (ii) procurement of 2 244 individual food samples throughout one year from the retail market across different districts and online sales platforms in Hong Kong; (iii) preparation of foods using habitual methods (e.g. washing, peeling, cooking) to simulate actual consumption; (iv) laboratory analysis of over 130 selected chemical substances of interest; (v) estimation of dietary exposure for the local population by integrating laboratory analytical results with the latest food consumption data; and (vi) comparison of the dietary exposure estimates against appropriate health-based guidance values to assess public health risks.

Unlike the routine food surveillance programme (FSP), HKTDS examine the entire diet and differ from FSP in the following areas (i) food samples representing the entire diet are included for sampling and testing; (ii) food samples are prepared as for consumption to take into account the effects of kitchen processing steps which may decrease or increase the levels of chemical substances present in foods; and (iii) individual food samples are pooled into composite samples for conducting laboratory analysis to reduce analytical costs. These distinctive features enable HKTDS to generate more realistic dietary exposure estimates of the local population.

Brief Results of the 2nd HKTDS

The reports of the 2nd HKTDS are being prepared and published in phases. As of June 2025, the reports on the results of comprehensive dietary exposure assessment of sulphites and nitrate/nitrite have been released.

Sulphites

Sulphites have a long history of use in food production for their multifunctional properties, particularly as preservatives and antioxidants. The 2nd HKTDS results revealed that the estimated dietary exposure to sulphites of the local adult and younger populations were well below the Acceptable Daily Intake (ADI) allocated to sulphites by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), indicating low health concern.

Nitrate and nitrite

Nitrate and nitrite are part of the nitrogen cycle, and are ubiquitous in the environment including soil, water, and air. The 2nd HKTDS results revealed that the estimated dietary exposure to nitrate of the average and high consumers of the overall local adult and younger populations fell within the range of ADI values estimated for nitrate by the European Food Safety Authority (EFSA), and the estimated dietary exposure to nitrite also fell below the ADI established by JECFA and EFSA for nitrite, indicating the general population is unlikely to experience any immediate health risks. Further reports from the 2nd HKTDS will be released in 2025 and 2026 through the designated webpage.

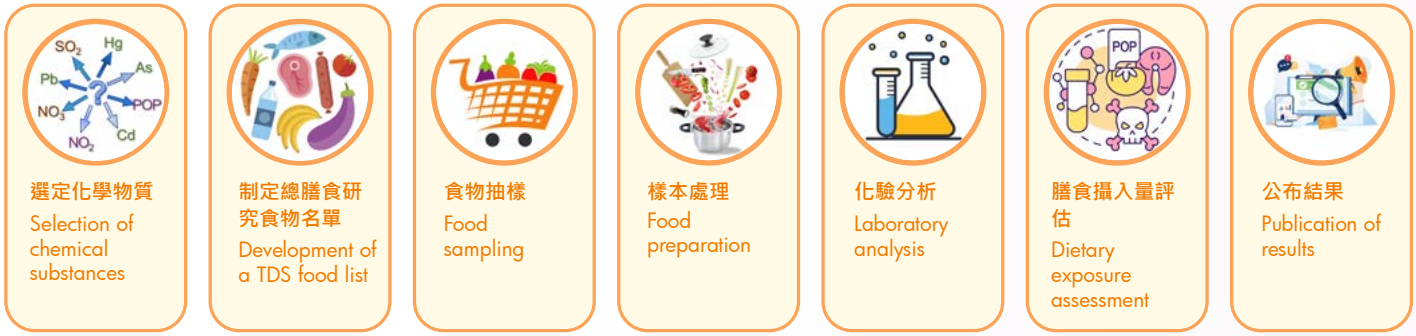

圖2：總膳食研究的組成部分
Figure 2. Components of TDS

夏日食物安全提示－安全溫度是關鍵

Summer Food Safety Tips – Safe Temperature is of the Essence

夏季較溫暖的氣候會增加食源性疾病的風險，因爲較高的溫度令食物處於危險溫度範圍（即攝氏4至60度之間），引致食物中毒的微生物如沙門氏菌和金黃葡萄球菌可在此溫度範圍內迅速生長及繁殖。壽司及冰凍甜點等高風險食物是不需經熱處理的即食食物，尤其容易受到影響。此外，若熟食在室温下存放過久，蠟樣芽孢桿菌等細菌便能產生耐熱毒素。

保持適當的貯存温度並採取食物處理措施，我們便可在炎熱的夏季月份減低食源性疾病的風險。舉例來說，冷凍和冷藏食物應分別貯存在攝氏4度或以下和攝氏-18度或以下。在保鮮格和冰格放置温度計，有助定時監察貯存格的温度。熱食應保存於攝氏60度以上。若必須在室温下存放食物，應嚴格遵從2小時／4小時原則來判斷食物可否安全地存放、進食或應棄掉。

Warmer weather in summer raises the risk of foodborne illnesses, as higher temperatures allow food to enter the Temperature Danger Zone (i.e. between 4°C and 60°C) where food poisoning microorganisms like *Salmonella* and *Staphylococcus aureus* can thrive and proliferate quickly. High-risk foods such as sushi and frozen confections are particularly vulnerable as they are ready-to-eat foods without further heat treatment. Besides, bacteria such as *Bacillus cereus* can produce heat-stable toxins if cooked food is left at room temperature for too long.

By maintaining proper storage temperatures and food handling practices, we can reduce the risk of foodborne illnesses during the hot summer months. For example, chilled and frozen food should be stored at or below 4°C and -18°C respectively. Installing thermometers in chillers and freezers can help to monitor the temperatures of storage compartments regularly. Hot food should be kept at above 60°C. When food has to be kept at room temperature, strictly follow the 2-hour/4-hour rule to determine whether the food should be safe to keep, to eat or to throw away.

圖3：在安全温度下貯存食物以確保食物安全
Figure 3. Storing food at safe temperatures to ensure food safety

食物安全日2025：防止交叉污染

Food Safety Day 2025: Preventing Cross-contamination

食物安全中心（食安中心）已啓動每年一度的食物安全日，以「防止交叉污染」為主題，藉以讓公眾和食物業（包括小學生）加深了解採取適當衞生和食物處理措施對降低食源性疾病風險的重要性。此活動響應聯合國每年在六月七日舉辦的世界食品安全日，彰顯全球對食品安全的重視。

當有害細菌從生的食物轉移至熟食或即食食物時，便會出現交叉污染，一般經由受污染的手、用具或各種接觸面傳播至其他食物。爲加强市民的認識，食安中心將於2025年食物安全日推出一系列推廣活動，包括主題短片、社交媒體貼文、食物安全中心WhatsApp頻道內的互動問答題、推廣及教育資源和講座。這些宣傳內容的核心訊息涵蓋食物安全五要點及適當衞生措施，重點推廣（一）分開生熟食物；（二）使用專用器具；及（三）保持良好個人衞生，以及洗手的重要性。詳情請瀏覽食物安全日專題網頁。

The Centre for Food Safety (CFS) kicked off its annual Food Safety Day (FSD) with the theme "Preventing Cross-contamination", which aims to raise awareness among the public (including primary school students) and the trade of the importance of proper hygiene and food handling practices in reducing foodborne illnesses. It echoes the World Food Safety Day of the United Nations, which is annually on 7th June, highlighting global food safety awareness.

Cross-contamination occurs when harmful bacteria are transferred from raw food to cooked or ready-to-eat food, often through contaminated hands, utensils, or surfaces. To increase public awareness, the CFS will release a series of promotional activities under FSD 2025, which include a thematic video, social media posts, interactive quiz posts in the CFS WhatsApp group, educational and promotional materials and talks. Key messages of these materials will cover the Five Keys to Food Safety and proper hygiene practices, emphasizing (i) separating raw and cooked foods; (ii) using designated utensils and (iii) maintaining good personal hygiene as well as the importance of handwashing. For further details, please visit the FSD thematic webpage.

風險傳達工作一覽（二零二五年六月）

Summary of Risk Communication Work (June 2025)

事故/ 食物安全個案 Incidents/ Food Safety Cases: 430	公眾查詢 Public Enquiries: 104	業界查詢 Trade Enquiries: 190	食物投訴 Food Complaints: 593	給業界的快速警報 Rapid Alerts to Trade: 1
給消費者的食物警報 Food Alerts to Consumers: 0	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: 44	上載到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 50	