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二零二三年食物事故回顧

Review of Food Incidents in 2023

食物安全中心風險管理組
黃文梁醫生報告

Reported by Dr. Man-leung WANG, Medical & Health Officer,
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食物安全中心(食安中心)設有食物事故監測系統，以主動監察香港以外地區有可能影響本港食物安全的食物事故。食安中心也與國際上的食物安全資訊網絡，例如國際食品安全當局網絡，以及歐洲聯盟食品和飼料快速預警系統合作，促進機構之間的協調和溝通，從而提升處理食物事故的效率。

The Centre for Food Safety (CFS) has established a Food Incident Surveillance System (FISS) to proactively monitor and identify food incidents occurring outside Hong Kong that could potentially affect local food safety. The CFS also collaborates with international food safety networks like the International Food Safety Authorities Network (INFOSAN) and the European Union's Rapid Alert System for Food and Feed (RASFF). These partnerships improve inter-agency coordination and communication, which improves the effectiveness of our management of food incidents.

二零二三年的食物事故

二零二三年，食安中心通過食物事故監測系統共監察到約3,500宗食物事故。食安中心通過檢查進口記錄，與有關當局聯繫，並聯絡本地業界追查有關食品，以調查有關食品是否在本地有售。

Food Incidents in 2023

In 2023, the CFS detected 3,500 food incidents through the FISS. The CFS investigated the availability of the implicated products locally by reviewing import records, coordinating with relevant authorities, and conducting checks with local traders.

當發現有關產品在本港市面有售時，食安中心因應風險評估結果及本港規例要求來實施不同的風險管理措施，包括按需要停售受影響產品、發起產品回收、加強監測行動和暫停進口。

Upon discovering the availability of the implicated products in the local market, based on the risk assessment and in compliance with local regulations, the CFS implemented various risk management measures. These included discontinuing the sale of affected products, initiating product recalls, intensifying surveillance efforts, and suspending imports as required.

食物事故類型 Types of Food Incidents

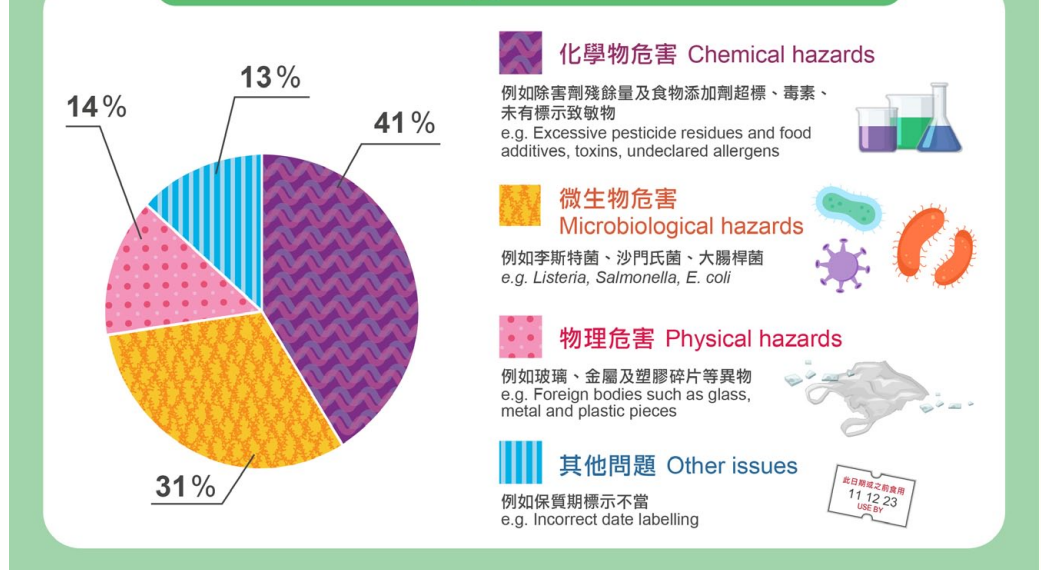


圖1: 二零二三年發出公告的食物事故類型 (由於四捨五入，數字總和不等於100%)

Figure 1: Types of food incidents with public announcements made in 2023 (The figures do not add up to 100% due to rounding.)

食安中心有效地向市民傳達有關食物事故的訊息，並提供全面的食品安全建議，特別是當事故會對本港有影響時。食安中心按需要發出新聞公報、業界警報及食物/致敏物警報通知消費者及業界有關產品回收行動。若經評估後認為受影響產品對本港沒有重大影響，食安中心則會發出食物事故報表。

二零二三年共有567宗食物事故需要採取跟進行動，食安中心因而發出557則食物事故報表、18則新聞公報、19則業界警報及35則食物警報/致敏物警報，涉及化學物危害（例如使用過量的食物添加劑、毒素、未有標示致敏物）、微生物危害（例如李斯特菌、沙門氏菌、大腸桿菌）、物理危害（例如異物），以及其他問題（例如保質期標示不當）。大部分事故與化學物及微生物危害有關，分別佔41%及31%。

食物事故風險管理

以下兩宗事例，說明食安中心如何通過食物事故監測系統有效處理食物事故，以及如何通過與國際上的食物安全資訊網絡合作，迅速實施管制措施。

使用捷克共和國出產的小麥製作的奧地利烘焙食品檢出毒死蜱

二零二三年六月，食安中心接獲歐洲聯盟食品和飼料快速預警系統通知，多種使用了由捷克共和國出產的小麥製作的烘焙食品，其小麥被驗出其毒死蜱含量最高達每公斤3.6毫克。此外，一個批次的預先包裝奧地利烘焙食品正計劃分銷到香港。

毒死蜱是一種除蟲劑，視乎其攝取量，進食毒死蜱可導致多種神經損害，包括昏迷，甚至死亡。根據《食物內除害劑殘餘規例》(第132CM章)，毒死蜱在大麥內的最高殘餘限量是每公斤0.5毫克。

食安中心在接獲通知後，隨即聯絡有關進口商以作跟進，並確認受影響產品仍在運往本港途中。所有受影響產品到港後，均由進口商自願交出，並在食安中心的監督下銷毀。

此個案顯示食安中心與國際食物安全機構的合作取得成效，凸顯及早通報對防止全球食物事故在本港發生的重要性。

懷疑受產志賀毒素大腸桿菌污染的法國生牛奶芝士

二零二三年十二月，食安中心通過食物事故監測系統得悉法國Rappel Conso發出通告，指有關生牛奶芝士產品可能受產志賀毒素大腸桿菌污染，正在當地進行回收。

用生乳製成的芝士受有害細菌污染，引致食物中毒事故都不時有報導。產志賀毒素大腸桿菌是可產生志賀毒素的致病菌株，能引致嚴重的疾病，包括出血性腹瀉及溶血尿毒症，導致腎衰竭。

食安中心從進口及零售層面追查有關食品是否在本地有售，證實受影響產品已由一名本地進口商進口本港。食安中心立即指令進口商停售、下架和回收受影響產品，又發出新聞公報提醒市民不要食用，並呼籲業界馬上停止使用或出售有關產品。

結語

食物事故監測系統能有效監察香港以外地區的食物事故，讓食安中心得以迅速應對食物事故，減低對市民健康的影響，保障本地食物安全。

The CFS effectively communicated and provided comprehensive food safety advice to the public on food incidents, particularly those of local relevance. The CFS issued press releases, trade alerts, and food/allergy alerts to inform consumers and the trade about product recalls when necessary. Food Incident Posts were issued when affected products were evaluated as not having major impact locally.

In 2023, there were 567 food incidents that required follow up action. The CFS responded by issuing 557 food incident posts, 18 press releases, 19 trade alerts, and 35 food alerts/allergy alerts, involving chemical hazards (e.g. use of excessive food additives, toxins, undeclared allergens), microbiological hazards (e.g. *Listeria*, *Salmonella*, *E. coli*), physical hazards (e.g. foreign matters), and other issues (e.g. incorrect date labelling). The majority of the food incidents were related to chemical and microbiological hazards, which accounted for 41% and 31% respectively.

Risk Management of Food Incidents

The two examples below illustrate how the CFS effectively manages food incidents detected through the FISS and how the CFS collaborates with international food safety networks to promptly implement control measures.

Bakery Products from Austria Made with Czech Republic Wheat that were Detected with Chlorpyrifos

In June 2023, the CFS received a notification from the RASFF that various bakery products were made with wheat from the Czech Republic, which was found to contain chlorpyrifos up to 3.6 mg/kg. Additionally, a batch of affected prepackaged bakery products from Austria was planned to be distributed to Hong Kong.

Chlorpyrifos is an insecticide. Ingesting chlorpyrifos may result in a variety of nervous system effects including coma and death, depending on the exposure. According to the Pesticide Residues in Food Regulation (Cap. 132CM), the maximum residue levels for chlorpyrifos in wheat is 0.5 mg/kg.

Upon receipt of the notification, the CFS immediately followed up with the concerned importer, and confirmed that the affected products were still on their way shipping to Hong Kong. All the affected products were voluntarily surrendered and disposed of by the importer under the supervision of the CFS on their arrival to Hong Kong.

This case demonstrated the successful collaboration between the CFS and international food safety agencies, highlighting the significance of early notification in averting the occurrence of worldwide food-related incidents in Hong Kong.

French Raw Milk Cheese Suspected to be Contaminated with Shiga Toxin-producing *E. coli* (STEC)

In December 2023, the CFS identified through the FISS a notification from the Rappel Conso of France that the raw milk cheese product was being recalled in France due to possible contamination with STEC.

From time to time, there were reports that cheese made from raw milk was contaminated with harmful bacteria and implicated in outbreaks of foodborne diseases. STEC is a pathogenic strain that can produce the Shiga toxin and can cause severe illnesses, including bloody diarrhoea and haemolytic-uraemic syndrome leading to kidney failure.

By conducting local sales checks at both the import and retail levels, the CFS verified that the affected product had been imported to Hong Kong by a local importer. The CFS immediately instructed the importer to cease sales, remove the products from shelves, and initiate a recall. A press release was issued to advise the public not to consume the affected products and urged the trade to stop using or selling the products concerned immediately.

Conclusion

The FISS effectively monitors food incidents outside Hong Kong, enabling the CFS to swiftly mitigate the public health impacts of food incidents and protect local food safety.

認識食物中的縮水甘油酯

Understanding Glycidyl Ester in Food

食物安全中心風險評估組
科學主任張鳳文女士報告

Reported by Ms. Iris CHEUNG, Scientific Officer,
Risk Assessment Section, Centre for Food Safety

在家烹調食物時或在食物製造過程中，可能會無意中產生一些化學副產物，這些物質稱為加工過程污染物。食物加工過程會令食物出現化學變化，或會無可避免產生有害物質。研究發現，消費者可能從食物攝入加工過程污染物，例子包括油炸馬鈴薯食品、餅乾、即食麵及烘焙食品。消費者該擔心嗎？本文將集中討論縮水甘油酯 - 一種與含精煉食用油脂成分及食物相關的加工過程污染物。

縮水甘油酯是如何形成的？

油脂在用作食物配料前必須經過一連串精煉程序，以確保食物安全和品質要求達標。縮水甘油酯主要在精煉油脂的過程中進行脫臭步驟時形成。進行此步驟時，油會加熱至攝氏200度或以上，引發一連串分解油脂的反應，繼而產生名為縮水甘油酯的化合物。

油脂內所含的不飽和脂肪酸能加快縮水甘油酯的形成，其中以甘油二酯為前體物質。植物生長的氣候、土壤、生長條件及收割技術是影響植物油中甘油二酯含量的部分因素，亦即植物油於精煉後所含的縮水甘油酯水平。甘油二酯轉化成縮水甘油酯會隨着溫度的上升呈指數增加，縮水甘油酯的形成大約於攝氏200度開始，在攝氏230度以上其形成會急劇增加。

縮水甘油酯如何進入人體？

精煉油脂廣泛用於食物製造過程，因此我們所吃的食物亦會含有縮水甘油酯。海外機構及組織進行的調查及研究說明，縮水甘油酯常存在於食用油脂（例如人造牛油、麻油和花生油）及使用這些油脂製作的食品（例如餅乾、薯條、薯片和即食麵）。儘管各種食物內的縮水甘油酯含量各異，一般來說，棕櫚油及含有棕櫚油的食物比其他油脂及同類型食品含有較高水平的縮水甘油酯。

人們進食後，含有縮水甘油酯的食物會在人體內被分解，並釋出縮水甘油。實驗動物研究顯示，縮水甘油會破壞基因。然而，目前還沒有證據表明縮水甘油能在人體產生同樣影響。儘管如此，歐洲聯盟以及澳洲和美國等國家已採納“可合理做到的盡可能低水平”原則，即採用防患於未然的做法管控縮水甘油酯可能造成的食物安全風險。雖然某些食物無可避免含有微量縮水甘油酯，食物業也應按照“可合理做到的盡可能低水平”的原則減低食物中的縮水甘油酯含量。消費者亦應保持均衡飲食，盡量減少進食脂肪及油。

食物安全中心的工作

食物安全中心（中心）已實行多項措施，藉以增加市民對食物內縮水甘油酯的認識，並就如何減少食物中的縮水甘油酯含量向業界提供建議。除通過不同渠道向市民傳達有關縮水甘油酯的食物安全建議及訊息外，中心也為業界舉辦多個有關縮水甘油酯的業界講座和研討會。此外，中心就本地市場的食用油脂進行風險評估研究，結果顯示本地食用油脂的縮水甘油酯平均含量較海外

During home cooking and food manufacturing, some unintended chemical by-products known as process contaminants can be formed. As food processing causes chemical changes in food, undesirable substances can be generated, which is often unavoidable. Research also revealed that food may expose consumers to process contaminants. Fried potato products, biscuits, instant noodles and baked goods are some of the examples. Should consumers be concerned? In this article, we will focus on one of the process contaminants, glycidyl ester (GE), which is commonly associated with food and food ingredients that contain refined edible fats and oils.

How is GE Formed?

To ensure food safety and quality criteria are met, fats and oils must go through a series of refinement processes before being utilized as ingredients in food. GE is mainly formed during the deodorisation step of oil refining for the removal of unwanted taste and odour. During this process, oils are heated at 200°C or above, and a series of reactions break down the fats and oils to form a compound known as GE.

Unsaturated fatty acids in oils could promote the formation of GE in oil and diacylglycerol (DAG) are known to be the precursor. For vegetable oils, climate, soil, growth conditions, and harvesting techniques of the source plants are some of the factors affecting the levels of DAG in the oils, subsequently the levels of GE after refining. The formation of GE from DAG is temperature-dependent. It begins at about 200°C and becomes more significant at above 230°C.

How does GE Get into Our Body?

Refined fats and oils are widely used in food manufacturing, which introduces GE into food products we consume. Researches and studies conducted by overseas authorities and organisations have demonstrated that GE is frequently found in edible fats and oils (e.g. margarine, sesame oil and peanut oil) and foods made from these oils (e.g. biscuits, French fries, potato chips and instant noodles). Although the amount of GE in different foods varies, GE levels are generally higher in palm oil and food products containing palm oil as an ingredient rather than other types of oils and similar products.

After food containing GE is consumed, it will be broken down in the human body and release glycidol. Research animal studies showed that glycidol is gene-damaging. However, there is currently no conclusive evidence that glycidol can have similar effect in humans. Nonetheless, European Union and countries like Australia and the United States have adopted the "As Low and Reasonably Achievable (ALARA)" principle, a precautionary approach to control the potential food safety risks from GE. Although the presence of trace amount of GE in some food is unavoidable, the food industry should implement measures to minimise the levels of GE in food according to the ALARA principle. Likewise, consumers should maintain a balanced diet and eat less fats and oils as far as possible.

What CFS has Done

The Centre for Food Safety (CFS) has taken a number of initiatives to raise the awareness of the public about GE in food and provide the trade with advice to reduce the level of GE in food. Apart from disseminating food safety advices and messages regarding GE to the public through various channels, trade talks and seminars about GE were organised for the industry. Besides, risk assessment studies on edible fats and oils available in the local market were also conducted. The results showed that the average level of GE in local edible fats and oils was lower than that in similar studies conducted overseas.

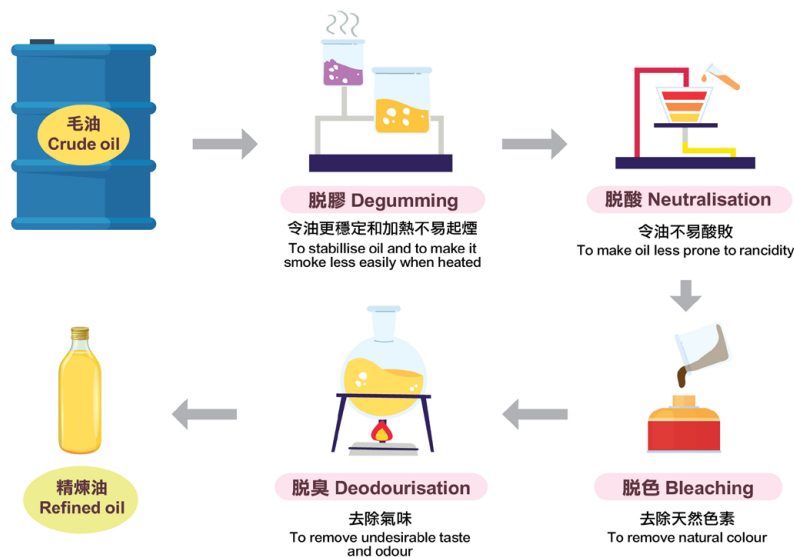


圖2: 食用油脂的精煉過程
Figure 2: Refining of edible fats and oils

的同類研究結果得出的含量為低。

業界應參考食品法典委員會制定的**操作規範**，選用適用於其製作過程及食品的技巧，以避免和減少縮水甘油酯在精煉油及使用精煉油製作的食品中形成。消費者應保持均衡及多元化的飲食，以減低因偏吃而攝入某些污染物的風險。使用新鮮配料在家配製食物，有助減少進食含相關油脂的加工食品。避免過量進食油脂含量高的食物（例如人造牛油）和含精煉油脂的食品（例如煎炸食品），也能減少從食物攝入縮水甘油酯。

The trade is advised to make reference to the [Code of Practice](#) developed by the Codex and select the techniques that are appropriate to their processes and products in order to prevent and reduce the formation of GE in refined oils and food products made with refined oils. Consumers should maintain a balanced and varied diet to minimise the risk of exposure to contaminants from a limited range of food items. Preparing home food with fresh ingredients can reduce the chance of consuming processed food items that contain the fats and oils concerned. Avoid excessive consumption of food that is rich in fats and oil (e.g. margarine) and food containing refined fats and oil (e.g. deep-fried products) can also reduce the exposure to GE in food.

進食野芋引致的食物中毒

Food Poisoning from Consumption of Wild Taro

2024年1月，一名50歲女子在進食其從山邊採摘的野生芋頭後，出現喉嚨痛和聲音嘶啞等病徵。該名病人因懷疑草酸鈣針晶體中毒入院接受治療，情況穩定。

許多植物都含有草酸鹽。部分草酸鹽是水溶性的，例如草酸鈉及草酸鉀；也有些草酸鹽（如草酸鈣及草酸鎂）可形成不能溶解的晶體。針晶體（針狀晶體）特別值得關注，因為烹煮不能清除這些針晶體，經咀嚼後可從植物細胞射向四周，能對口腔造成刺激和損傷。

在本港，與草酸鈣針晶體有關的中毒事故大多涉及進食野芋或懷疑與野芋葉混在一起或以野芋葉包裹的農產品。要避免草酸鈣中毒，切勿採食野生植物，也不要再在運送及加工處理期間以野芋葉覆蓋或包裹農產品。

In January 2024, a 50-year-old woman [developed](#) sore throat and hoarseness after consuming wild taro she collected from a hillside. She was admitted to the hospital for suspected calcium oxalate raphide poisoning and was in stable condition.

Many types of plants contain oxalates. Some, like sodium and potassium oxalate, are soluble in water. Others, like calcium and magnesium oxalate, can form insoluble crystals. The raphides (needle-shaped crystals) are of particular concern as they cannot be destroyed by cooking and can shoot out from the plant cells into its surroundings after being chewed. This can lead to irritation and injuries to the oral cavity.

Locally, food poisoning cases with calcium oxalate raphides mainly involve the consumption of wild taro or other produce that are suspected to be mixed or wrapped with wild taro leaves. To prevent calcium oxalate poisoning, do not pick and eat wild plants and do not use wild taro leaves to cover or wrap produce during transportation and processing.

非洲豬瘟不會構成食物安全風險

African Swine Fever Does Not Pose Food Safety Concern

最近有本地豬隻被檢測出非洲豬瘟病毒。非洲豬瘟是豬隻病毒性疾病，具高度傳染性，但不會感染人類。

為減低豬隻在屠房感染非洲豬瘟的風險，屠房由2019年6月起實施了「日日清」措施，即所有運到屠房的活豬會在24小時內屠宰。豬欄每日均會清空，以進行徹底清潔消毒。活豬運輸車每次離開屠房前均會徹底清潔消毒；運輸本地和進口活豬的車輛，清潔消毒地點在分隔的專用位置。屠房在出入口附近增設了消毒池，以便進出屠房的運輸車消毒車輪。所有豬隻必須在屠房通過嚴格的宰前及宰後檢驗，以確保適宜供人食用，方可供應市場。

雖然非洲豬瘟並非人畜共患病，不會構成食物安全風險，但豬肉仍應徹底煮熟才食用，以降低食源性病原體引起的任何風險。

Recently, there were local pigs tested positive for African Swine Fever (ASF) virus. ASF is a highly contagious viral disease affecting pigs, but it does not infect humans.

To minimise the risk of ASF in slaughterhouses, a daily clearance arrangement has been implemented since June 2019, whereby all live pigs will be slaughtered within 24 hours upon admittance into the slaughterhouses. Lairages will be cleared out for thorough cleansing and disinfection every day. Live pig vehicles are thoroughly cleaned and disinfected every time they leave the slaughterhouse, and the respective designated positions for the cleaning and disinfection of vehicles carrying local and imported pigs are separated. Disinfection pools have been installed near the entrance gate to facilitate disinfection of wheels for pig-conveying trucks entering and leaving slaughterhouse. All pigs have to undergo ante-mortem and post-mortem inspections before supply to the market to ensure that they are fit for consumption.

Though ASF is not a zoonotic disease and poses no food safety concern, pork should be cooked thoroughly before consumption to reduce any risk caused by foodborne pathogens.



風險傳達工作一覽（二零二四年一月）

Summary of Risk Communication Work (January 2024)

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