食物安全焦點
Food Safety Focus

食物安全中心
Centre for Food Safety

食物環境衞生署
Food and Environmental Hygiene Department

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二零二二年食物事故回顧
Review of Food Incidents in 2022

食物安全中心風險管理組
李予晴醫生報告

Reported by Dr. Yu-ching LI, Medical & Health Officer, Risk Management Section, Centre for Food Safety

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的食物事故，並迅速採取風險管理行動，保障本港市民健康。食安中心也加入了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，以加強與其他食品安全當局的合作。

二零二二年的食物事故

二零二二年，食安中心通過食物事故監測系統共監察到大約 2 500 宗食物事故。針對對本港有潛在影響的食物事故，食安中心評估風險，並檢查進口記錄，與有關當局聯繫，以及聯絡本地業界追查是否有售，以調查有關食品是否在本地有售。食安中心因應風險評估結果及對本港的影響，制訂不同的風險管理行動，包括停售受影響產品、回收有關產品、加強監測和暫停進口。

The Centre for Food Safety (CFS) has established the Food Incidents Surveillance System (FISS) to proactively monitor food incidents occurring outside Hong Kong and take swift risk management actions to protect local public health. The CFS also participates in international food safety networks such as the International Food Safety Authorities Network (INFOSAN), and the European Union's Rapid Alert System for Food and Feed (RASFF) to enhance collaboration with other food safety authorities.

Food Incidents in 2022

The CFS detected around 2 500 food incidents from the FISS in 2022. In response to those food incidents having potential local impact, the CFS assessed the risk and investigated the local availability of the products in question by reviewing relevant import records, liaising with relevant authorities and conducting sales checks with local traders. Depending on the risk assessment and the scale of the local impact, the CFS developed various risk management actions, including discontinuing the sale of concerned products, product recall, enhanced surveillance and import suspension.

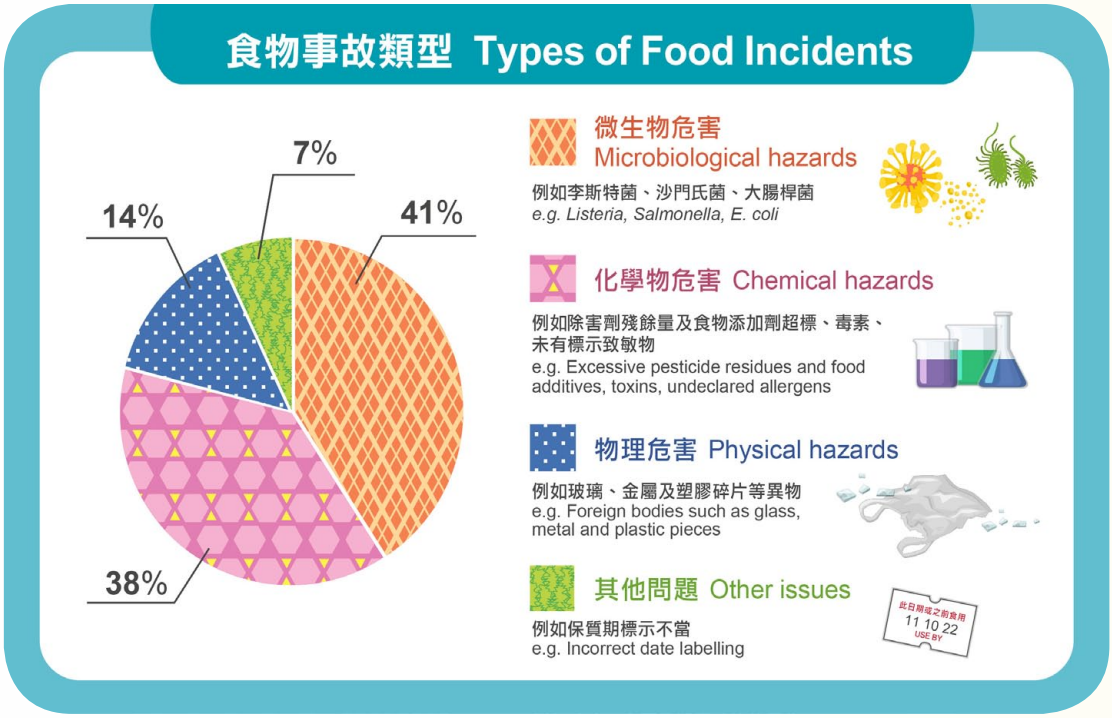

圖1：二零二二年發出公告的食物事故類型
Figure 1: Types of food incidents with public announcements made in 2022

食安中心通過不同渠道發出公告通知市民有關食物事故，並提供食物安全建議。當有關產品在本港有售並須回收時，食安中心會通過新聞公報、業界警報及食物／致敏物警報通知消費者及業界。若受影響產品沒有在本港出售，食安中心則會發出食物事故報表提醒市民。

二零二二年，食安中心共發出349則食物事故報表、25則新聞公報、26則業界警報及22則食物警報／致敏物警報，涉及化學物危害（例如除害劑殘餘量及食物添加劑超標、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）。大部分事故與微生物及化學物危害有關，分別佔41%及38% (圖1)。

食物事故風險管理

以下在二零二二年發生的事例，說明食安中心如何通過食物事故監測系統偵察食物事故，制訂有效的風險管理策略並實施適當的管制措施。

懷疑受沙門氏菌污染的朱古力產品

二零二二年四月初，食安中心通過食物事故監測系統得悉多個食物安全當局發出通告，指一個品牌部分批次的朱古力產品因可能與爆發沙門氏菌感染有關而需要進行回收。食安中心立即聯絡有關當局和國際食品安全當局網絡──一個由各國食物安全當局組成的網絡──了解事故詳情。食安中心與業界採取跟進行動，得悉受影響產品已在本港進口和銷售。食安中心指令進口商回收受影響產品，並發出新聞公報及業界警報。此外，食安中心又加強抽檢同一品牌的朱古力產品。

其後，國際食品安全當局網絡發出相關警報，指比利時一間工廠生產的有關品牌朱古力產品因與多國爆發過百宗沙門氏菌感染個案有關而進行全球回收。隨着事態發展，全球回收的產品數目有所增加，食安中心繼續通過食物事故監測系統監察最新情況，並通知市民及業界。本港並無因進食受影響產品而導致的沙門氏菌食物中毒報告。

可能含有環氧乙烷的雪糕產品

二零二二年六月，食安中心通過食物事故監測系統得悉有食品安全當局發出公告，指歐洲某品牌的雪糕產品被驗出含有除害劑環氧乙烷。其後，食安中心接獲歐洲聯盟食品和飼料快速預警系統通知，同一品牌被驗出含有環氧乙烷的其他種類雪糕已分銷到香港。

國際癌症研究機構目前將環氧乙烷歸類為令人類致癌（第一組）。食安中心立即與有關當局及業界聯繫以作出跟進行動。食安中心通過新聞公報及業界警報呼籲進口商回收產品，提醒市民不要食用，並指令業界不要出售受污染的產品。食安中心又加強抽檢同一品牌的雪糕。

結語

食安中心致力通過及早偵察和採取行動，迅速應對食物事故，以保障公眾健康。食安中心利用食物事故監測系統，快速偵察及應對食物事故，確保本港食物安全。

Through various public announcement channels, the CFS informed the public about the food incidents and provided food safety advice. When local sale was identified and product recall was required, the CFS notified consumers and food business via press release, trade alert, and food/allergy alert. When the impacted products were not available locally, the CFS released a food incident post instead to alert the public.

In 2022, the CFS issued 349 food incident posts, 25 press releases, 26 trade alerts, and 22 food alerts/allergy alerts, involving chemical hazards (e.g. excessive pesticide residues and food additives, toxins, undeclared allergens), microbiological hazards (e.g. *Listeria, Salmonella, E. coli*), physical hazards (e.g. foreign bodies), and other issues (e.g. incorrect date labelling). The majority of the food incidents with public announcements made were related to microbiological and chemical hazards, which accounted for 41% and 38% respectively. (Figure 1).

Risk Management of Food Incidents

The following examples that occurred in 2022 illustrate how the CFS detects food incidents through the FISS, formulates effective risk management strategies and implement appropriate control measures.

Chocolate products with possible *Salmonella* contamination

Through the FISS, the CFS identified notices issued by food safety authorities in early April 2022 regarding recall of certain batches of a brand of chocolate products due to possible link to an outbreak of *Salmonella* infections. The CFS immediately contacted the authorities concerned and the INFOSAN, an international network of food safety authorities, to obtain more information about the incident. The CFS followed up with the trade and identified local import and sale of the affected products in Hong Kong. The CFS instructed the importers to recall the affected products, and issued press release and trade alert promptly. Moreover, the CFS enhanced surveillance on chocolate products of the same brand.

The INFOSAN later issued a related alert regarding a global recall of the concerned brand of chocolate products produced in a factory in Belgium, which were linked to a multi-country outbreak of *Salmonella* with over a hundred cases reported from various countries. The CFS continued to monitor the latest development through the FISS. As the incident evolved with increasing number of products being recalled globally, the CFS informed the public and the trade about the latest situation. There were no reports of local cases of *Salmonella* food poisoning associated with the consumption of the affected products.

Ice cream products with possible presence of ethylene oxide

In June 2022, through the FISS, the CFS identified an announcement from a food safety authority regarding a certain brand of ice cream products from Europe detected with a pesticide, ethylene oxide (EO). Subsequently, the CFS received a notification from RASFF that other kinds of ice cream of the same brand found to contain EO had been distributed to Hong Kong.

The International Agency for Research on Cancer classified EO as carcinogenic to humans (Group 1). The CFS immediately liaised with the authorities concerned and the trade for follow-up. Through press releases and trade alerts, the CFS urged the importer to initiate a recall, advised the public not to consume, and instructed the trade not to sell the implicated items. The CFS also stepped up surveillance on the same brand of ice cream.

Conclusion

The CFS strives to safeguard public health by responding quickly to food incidents through early detection and intervention. To ensure local food safety, the FISS is a tool used by the CFS to detect and respond quickly to food incidents.

我們應對食物中的防腐劑和抗氧化劑存有疑慮嗎？

Should We Worry about Preservatives and Antioxidants in Food – Or Should We Not?

食物安全中心風險評估組
科學主任黃詩雯女士報告

Reported by Ms. Sosanna WONG, Scientific Officer,
Risk Assessment Section, Centre for Food Safety

若沒有防腐劑和抗氧化劑，可以想像，消費者能選擇的食物或會減少，因為多種加工食物均含有這些添加劑，常見的例子包括午餐肉、煙肉、人造牛油、醬汁、麵包、果汁、零食等等。然而，很多人也許不知道，部分食物因應其特性，需要使用防腐技術協助保持安全和新鮮。為滿足對安全、便捷及穩定的食物供應的需求，防腐劑和抗氧化劑的角色正變得更不可或缺。

為何在食物中加入防腐劑和抗氧化劑？

食物防腐的歷史可追溯至遠古時期用糖保存水果和用鹽保存肉類，讓採收的食物能可食用較長時間。部分人或會覺得防腐劑和抗氧化劑相似，但兩者在食物中的作用截然不同，分別對抗食物的兩大敵人：微生物和氧化。

防腐劑以抑制微生物滋長來防止食物變質。有害細菌能入侵食物，進食後可引發嚴重疾病，例如肉毒桿菌能產生毒性強烈的神經毒素，可引致致命的肉毒中毒。防腐劑能在加工處理肉類等食物的生產過程中抑制這種細菌生長。其他微生物如真菌和酵母菌也能引致食物變質並產生影響健康的毒素。因此，除了能保持食物品質，防腐劑對預防食源性疾病也尤為重要。

另一方面，抗氧化劑防止食物因氧化導致變質。暴露於空氣中的食物有可能氧化，或會發出臭味及變色。此時抗氧化劑能發揮作用，防止油脂出現酸敗繼而產生異味，並減慢蔬果變色。

近年，在消費者的需求和全球化的影響下，食物生產出現了重大進展。大規模跨境食品加工是全球食物供應鏈的重要環節。經處理的食物在位於世界一端的處理工場運送到遠在世界另一端的消費者手上，過程中食物添加劑用於協助確保食物安全及完好。若沒有防腐劑和抗氧化劑，人類的食物選擇便會減少，多種食物會變得昂貴，更多人會難以獲得安全的食物，而更多食物會白白浪費。更重要的是，很多人可能會因進食變質食物而生病。

圖2: 防腐劑和抗氧化劑有助確保經處理的食物在從世界一端運送到世界另一端的過程中保持安全及完好

Figure 2: Preservatives and antioxidants help ensure processed food remains safe and in good condition throughout its journey from one part of the world to consumers in another part of the world

防腐劑和抗氧化劑可安全食用嗎？

雖然防腐劑和抗氧化劑有改善食物安全和減少食物浪費的好處，但必須通過嚴格的安全評估，確定相關使用量不會對消費者健康帶來可見風險，才可使用於食物中。國際上，由聯合國糧食及農業組織/世界衛生組織食品添加劑聯合專家委員會進行安全評估，聯合國糧食及農業組織/世界衛生組織食品法典委員會則根據有力的科學原則，制定食物添加劑標準，以期保障消費者健康，確保國際食品貿易公平。

本港如何規管防腐劑和抗氧化劑？

在香港，《食物內防腐劑規例》（第132 BD章）訂明准許防腐劑和抗氧化劑的種類和在指明的食物中的最高准許含量。

Imagine there are no preservatives and antioxidants. Consumers may be offered less choice of foods because many processed foods contain these additives. Some common examples are luncheon meat, bacon, margarine, sauces, bread, juice, snack etc. Many people, however, may not be aware that some food, because of their nature, require the use of preservation techniques to help maintain their safety and freshness. In meeting the demand for a safe, convenient and stable supply of food, the role of preservatives and antioxidants is even getting more indispensable.

Why are Preservatives and Antioxidants Added to Food?

The history of food preservation can be traced back to the ancient times when sugar was used to preserve fruit and salt was used to preserve meat to keep harvested food edible over a longer period of time. While some may find preservatives and antioxidants similar, they perform distinct functions in foods by combating two major enemies of our foods, microbes and oxidation, respectively.

Preservatives prevent spoilage of foods by inhibiting the growth of microbes. Harmful bacteria can invade our foods and, if consumed, can cause us to become critically ill. *Clostridium botulinum*, for example, produces very potent neurotoxin that can cause life-threatening botulism. Preservatives can inhibit the growth of this bacterium in the manufacturing of food such as cured meat. Other microbes like fungi and yeasts can also cause food spoilage and produce toxin that is harmful to our health. Therefore, in addition to maintaining the quality of foods, the use of preservatives is particularly important to prevent foodborne illness.

Antioxidants, on the other hand, protect foods against deterioration caused by oxidation. When exposed to oxygen in the air, oxidation may occur that cause undesirable flavour and colour changes in foods. This is where antioxidants come into play to prevent fats and oils from turning rancid and developing an unpleasant off-flavour, as well as slow down discoloration of fruits and vegetables.

In recent years, food production has undergone tremendous advances, largely driven by consumer demands and globalisation. Large-scale, cross-border food processing is an important part of the global food supply chain. Food additives are used to help ensuring that processed food stays safe and in good condition during its journey from processing plants in one part of the world to hands of faraway consumers in yet another part of the world. Without preservatives and antioxidants, people will not have as many food options, many foods would be more expensive, more people will not have sufficient access to safe food, while more food would be wasted. More importantly, many people might have gotten sick from consumption of spoiled food.

Are Preservatives and Antioxidants Safe for Consumption?

Despite their benefits in improving food safety and reducing food waste, preservatives and antioxidants are permitted for use in food only after they have undergone stringent evaluation and are found not to present an appreciable health risk to consumers at the levels of use. At the international level, the safety assessment is conducted by the FAO/WHO Expert Committee on Food Additives (JECFA), and food additive standards are developed by the FAO/WHO Codex Alimentarius Commission (Codex) based on sound scientific principles with a view to protecting the health of consumers and ensuring fair international food trade.

How are Preservatives and Antioxidants Regulated in Hong Kong?

In Hong Kong, the Preservatives in Food Regulation (Cap. 132BD) specifies the types of permitted preservatives and antioxidants and their maximum permitted levels in specified foods.

此外，食物製造商應奉行優良製造規範，所添加的防腐劑和抗氧化劑分量只限於在食物中達到預期技術效用所需的最低分量。

如何作出知情選擇？

消費者可作出知情選擇，閱讀食物包裝上的配料表，查看是否含有防腐劑和抗氧化劑。根據《食物及藥物(成分組合及標籤)規例》（第132W章），出售的預先包裝食品如使用了食物添加劑（包括防腐劑和抗氧化劑），必須在食物標籤上的配料表中列明其作用類別及其本身所用名稱或識別編號。

In addition, food manufactures should practice Good Manufacturing Practice and apply preservatives and antioxidants in a way that only the minimum amount is added to achieve the desired technological effect.

How to Make an Informed Choice?

Consumers can make an informed choice and check if preservatives and antioxidants are present by reading the ingredient list on the food package. According to the Food and Drugs (Composition and Labelling) Regulations (Cap. 132W), if a food additive, including preservatives and antioxidants, is used in a prepackaged food, it must be listed by its functional class together with its specific name or identification number in the ingredient list on the food label.

售賣機出售的即食食物的微生物質素

Microbiological Quality of Ready-to-eat Food Sold by Vending Machines

食物安全中心（食安中心）進行了一項有關售賣機出售的即食食物微生物質素研究。近年，除了單一售賣預先包裝食物，部分新型售賣機會出售於售賣機內進行簡單加工的食物。有關操作須特別注意温度控制和清潔，以保障食物衞生和安全。

從這些售賣機收集得來的74個食物樣本均沒有驗出食源性致病菌。質素指標方面，大部分(89%)樣本的需氧菌落計數令人滿意。然而，八個(11%)樣本的起因可能與所使用配料的質素有關，或是由於混合配料或輸送產品時受到污染。食物業界應參考食安中心指引，妥善處理配料，一直保持適當貯存温度並定期及在需要時清潔售賣機。

The Centre for Food Safety (CFS) has conducted a study on the microbiological quality of ready-to-eat food sold by vending machines. In recently years, other than only dispensing prepackaged food, some newer vending machines involve on site processing, which requires more vigilance in temperature control and cleanliness in order to maintain food hygiene safety.

Of the 74 samples taken from these vending machines, none were detected with foodborne pathogens. On quality indicator, the majority (89%) had satisfactory aerobic colony count (ACC). However, eight (11%) of samples had borderline levels of ACC used or contamination during the mixing or dispensing of the products possibly. Food business should take reference from the CFS Guideline and handle ingredients properly, maintain appropriate holding temperature at all times and clean the vending machines regularly and as needed.

發霉食物與食物安全

Mouldy Food and Food Safety

春季温暖潮濕的天氣有利霉菌生長。放置沒有蓋好的食物和剩餘的食物於室温下，能引致食物受環境中的霉菌孢子和萌發的霉菌污染。霉菌孢子無處不在；霉菌不但能令食物腐壞和影響食物品質，部分霉菌更可產生引致疾病的毒素。

適當地貯存食物能減少食物受孢子和霉菌生長污染。剩餘食物和已開封罐頭內未經食用的食物應轉至乾淨的容器中，然後放入雪櫃，並盡快食用。無須放進雪櫃的乾貨應存放在陰涼乾燥的地方。消費者應避免貯存過多食物。值得注意的是，雖然除去霉菌及食物發霉的周圍部分或有助除去所含的毒素，但霉菌的菌絲可侵入食物深處，因此這樣做不足以保證可清除所有霉菌和毒素。為保障食物安全，食物發霉便應丟棄，不要食用。

The warm and humid weather in spring promotes mould growth. Leaving food and leftovers uncovered at room temperature could cause contamination of food by mould spores from surroundings and mould germination. Mould spores are ubiquitous. Not only can mould cause food spoilage and affect product quality, some of them can also produce toxins that can cause illnesses.

Proper food storage can reduce food contamination by spores and mould growth. Leftovers and opened cans of unfinished foods should be transferred into clean storage containers for refrigeration and consumed as soon as possible. Keep food that requires no refrigeration, like dried food, in a cool and dry place. Consumers should also avoid overstocking. Of note, removing the mould and the surrounding food materials may help to remove the toxins present, but hyphae of the mould can invade deeply into the food – there is no guarantee that all moulds and toxins can be removed. For food safety's sake, do not eat mouldy food and throw it away.

風險傳達工作一覽（二零二三年一月）

Summary of Risk Communication Work (January 2023)

事故/ 食物安全個案 Incidents/ Food Safety Cases: 177	公眾查詢 Public Enquiries: 71	業界查詢 Trade Enquiries: 118	食物投訴 Food Complaints: 405	給業界的快速警報 Rapid Alerts to Trade: 7
給消費者的食物警報 Food Alerts to Consumers: 2	懷疑食物中毒個案通報 Suspected Food Poisoning Alerts: 4	教育研討會/ 演講/ 講座/ 輔導 Educational Seminars/ Lectures/ Talks/ Counselling: 83	上載到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 41	