

# 食物安全焦點

# Food Safety Focus



食物安全中心  
Centre for Food Safety

二零一三年二月·第七十九期  
February 2013 · 79th Issue  
ISSN 2224-6908



由食物環境衛生署食物安全中心於每月第三個星期三出版  
Published by the Centre for Food Safety, Food and Environmental Hygiene Department on every third Wednesday of the month

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## 焦點個案 Incident in Focus

## 二零一二年食物事故回顧

## Review of Food Incidents in 2012

食物安全中心

風險管理組

李育奇醫生報告

Reported by Dr. Yu-chi LI, Medical & Health Officer,

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食物事故是指可能影響食物安全的事件。由於本港大部分食品均由外地入口，除了監察本地食物事故外，食物安全中心(中心)每天均密切留意海外食物規管當局及傳媒報道的食物事故。

### 二零一二年的食物事故

二零一二年，中心一共監察到1 008宗食物事故，數目比二零一一年915宗略高。一如以往，非本地個案依然佔大多數(98.3%)。台灣(45%)、北美(27%)、中國內地(9%)、歐洲(8%)和澳紐(5%)的個案最多。台灣公布的食物事故上升了60%，致使二零一二年的食物事故總數有所增加。期內台灣並無重大食物事故發生。

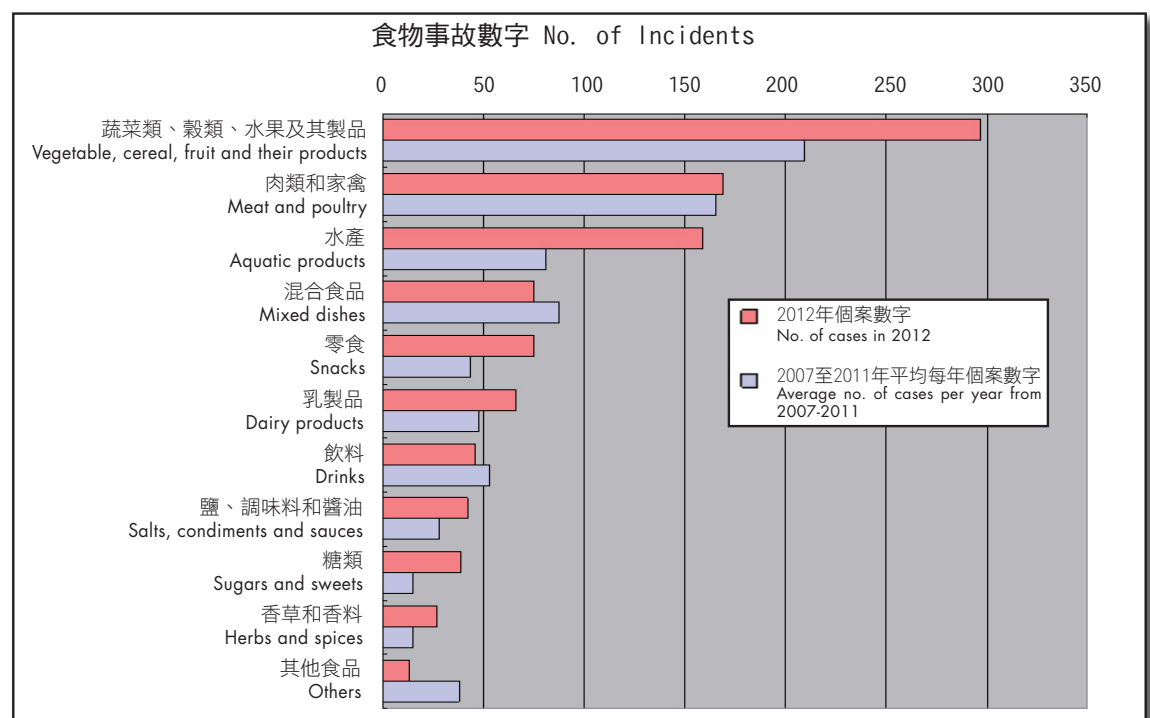
在監察到的食物事故中，以涉及蔬菜類、穀類、水果及其製品的增幅最大，其次為水產(見圖一)。與往年一樣，大部分事故與化學物質和有害微生物超標有關(見圖二)。但與二零零七至二零一一年的平均數字比較，涉及化學危害的個案佔整體個案的比率有所上升，由45.4%增至51% (見圖二)。

Food incidents refer to events which have potential food safety implications. As the majority of food supply in Hong Kong is imported, apart from monitoring local food incidents, the Centre for Food Safety (CFS) also conducts daily surveillance of food incidents reported by overseas authorities and the mass media.

### Food Incidents in 2012

In 2012, a total of 1,008 food incidents were identified by the CFS. The figure was slightly higher as compared to 915 cases in 2011. As in past years, non-local incidents constituted the majority (98.3%) of all cases. Taiwan (45%), North America (27%), Mainland China (9%), Europe (8%) and Australia/ New Zealand (5%) reported the most cases. A 60% increase in cases reported by Taiwan had mostly accounted for the overall rise in incidents identified in 2012. No major food incident was identified in Taiwan.

Incidents involving vegetables, cereal, fruits and their products had the greatest increase, followed by those concerning aquatic products (Figure 1). Chemical and microbiological hazards accounted for most of the incidents as in previous years. Compared with the average percentage of 2007-2011, however, the percentage of chemical hazard related cases rose significantly in 2012 from 45.4% to 51% (Figure 2).



圖一：2007至2012年按食物類別劃分的食物事故數字  
Figure 1. Number of food incidents by food commodity in 2007-2012.

焦點個案  
Incident in Focus

中心採取的行動

中心每次發現食物事故，都會評估該事故對市民健康的影響，以決定最適當的跟進行動，包括聯絡有關當局，向業界發出快速警報，派員到市面巡查以了解有關產品有否在本港出售，抽取樣本進行測試，發出新聞公報，以及發起回收行動或頒布禁止令等。二零一二年，中心因應食物事故發出了380則業界警報、14則新聞公報和19則食物警報。此外，由二零一二年九月起，中心在網頁上新闢“食物事故報表”欄目，刊登經評估後認為對本港人口影響有限的食物事故，用意是提醒那些可能透過網購、旅遊或其他個人原因而擁有這些產品的個別市民。二零一二年共刊登了139宗這類事故。

重大食物事故

二零一二年，中心監察到不少引起公眾關注的重大食物事故，現撮述三宗如下：

1. 加拿大牛肉製品受O157:H7型大腸桿菌污染

二零一二年九月，中心從加拿大食物檢查局網頁上得悉加拿大境內有食品加工場的牛肉製品受O157:H7型大腸桿菌污染，事件涉及18宗人類感染個案。這些受影響的牛肉製品有部分批次出口至香港。中心隨即展開調查，並採取所需行動，一方面禁止有關加工場的牛肉製品輸入本港，通知業界，追查分銷情況，並指示回收牛肉製品；另一方面發布新聞公報，通知市民。

其後中心收到加拿大當局的評估報告，指有關食品加工場的污染情況已受到控制，中心遂於二零一二年十二月十八日解除輸入禁令。事件中並無本地感染個案。

2. 美國花生醬受沙門氏菌污染

二零一二年九月，中心留意到美國多個州份爆發沙門氏菌感染，有42人患病。源頭懷疑是一花生醬生產商。該生產商的各種花生醬及其副產品已一一回收。

中心調查發現本港進口商曾進口其中兩款產品，遂發起回收行動。進口商亦自願交出剩下的存貨作銷毀。中心派員巡查，並無在零售層面發現受影響的產品。中心已通知業界停止出售上述產品，並發布新聞公報，建議消費者停止進食相關產品。問題產品並無在本港引致相關的食物中毒爆發事件。

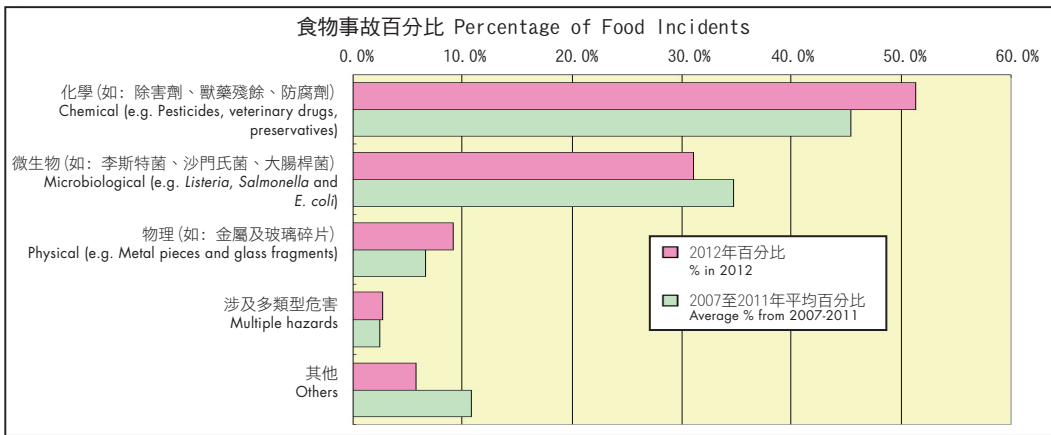
3. 食油質素有問題

二零一二年十二月中旬，有報章報道一無牌食品加工場向食肆供應質素有問題的食油，並檢測出食油含高量苯並[a]芘(benzo[a]pyrene)。中心立即展開調查，從不同處所抽取食油樣本作化驗。其中一名供應商的同一品牌食油有三個樣本的苯並[a]芘含量超出每公斤10微克的國家標準。

中心諮詢食物安全專家委員會的意見後，為食油中的苯並[a]芘含量制定每公斤10微克的行動水平，以便採取執法行動。此外，中心又進行專項食品調查，從供應鏈的不同層面抽取102個食油樣本作苯並[a]芘檢測，結果全部合格。有關事件的更多資料，請瀏覽“食油中的苯並[a]芘”專題網頁。

總結

及早對食物事故採取行動，對於控制及消除因食物危害所帶來的潛在風險尤關重要。中心設立的監察及應變系統一直行之有效，使中心能適時監察及處理食物事故。



圖二：2007至2012年按危害類別劃分的食物事故比率  
Figure 2. Percentage of food incidents by type of hazards in 2007-2012.

Actions Taken by the CFS

The CFS assesses the public health significance of each incident and takes appropriate actions, which might include contacting relevant authorities, issuing rapid trade alert, conducting sales check, and taking food samples for testing, making public announcement and initiating recall or issuing prohibition order. In 2012, the CFS issued 380 trade alerts, 14 press releases and 19 food alerts related to these incidents. In addition, the CFS has been posting incidents assessed to have limited local impact through the “Food Incident Post” on its website since September 2012 to alert individuals who might be in possession of related food products through e-trade, travel, or other personal reasons. A total of 139 incidents were posted in 2012.

Important Food Incidents

Three of the detected food incidents that raised greater concerns in 2012 are highlighted below.

1. Canadian beef product contaminated with *E. coli* O157:H7

In September 2012, the CFS learned from the Canadian Food Inspection Agency’s website that beef products from an establishment in Canada were contaminated with *E. coli* O157:H7 and 18 human cases were reported. Some consignments of the affected beef products had been exported to Hong Kong. The CFS immediately conducted investigation and took necessary actions including suspension of import of beef products from the establishment concerned, alerting the trade, tracing distribution and initiating recall of the beef products. A press release was issued to inform the public.

The import suspension was lifted on 18 December 2012 upon receiving Canadian authority’s assessment report concluding that the risk of contamination has been effectively controlled at the establishment. There has not been any related local human infection case.

2. Peanut butter from the United States (US) contaminated with *Salmonella*

In September 2012, the CFS noted a multistate outbreak of *Salmonella* in the US with 42 people affected. One peanut butter manufacturer was suspected to be the source. Various peanut butter products and secondary products were recalled.

Investigation by the CFS found that an importer in Hong Kong had imported two of the products and recall was initiated. The importer voluntarily surrendered all remaining stocks for disposal. Sales check by the CFS at retail level did not find any affected products. The CFS alerted the trade to stop selling the products concerned and a press release was issued to advise the public not to consume them. There has not been any related local outbreak.

3. Substandard cooking oil

In mid-December 2012, a newspaper alleged that a suspected unlicensed food processing establishment supplied substandard cooking oil with high level of benzo[a]pyrene (B[a]P) to restaurants. The CFS immediately conducted investigation and took cooking oil samples from different premises for testing. Three oil samples of the same brand from a supplier were found to contain B[a]P at levels exceeding the Mainland limit of 10 µg/kg.

In consultation with the Expert Committee on Food Safety, the CFS has set an action level of 10 µg/kg for B[a]P in cooking oil for necessary enforcement actions. A targeted surveillance project on cooking oil was conducted and test results of B[a]P in 102 samples taken from various levels of the supply chain were all satisfactory. More information about the incident can be found at the “Benzo[a]pyrene in Cooking Oil” webpage.

Conclusion

Early intervention of food incidents is vital in controlling and aborting the potential risks associated with food hazards. The effective food incident surveillance and response system put in place has enabled the CFS to detect and manage food incidents in a timely manner.





# 嬰幼兒配方奶中的DHA —— 過多無益

## DHA in Formula Products for Infants and Young Children — More is Not Better

食物安全中心  
風險評估組  
科學主任廖珮珊女士報告

Reported by Ms. Melissa LIU, Scientific Officer,  
Risk Assessment Section,  
Centre for Food Safety

我們在上一期介紹了母乳和嬰兒配方奶中的常量營養素，這次我們會探討一種嬰幼兒配方奶產品中常見的營養素——二十二碳六烯酸 (DHA)。

### DHA是甚麼？

DHA是一種長鏈多元不飽和脂肪酸，是胎兒和嬰兒出生頭兩年視力和腦部正常發育的關鍵元素。母乳、魚油和海藻中都含有不同分量的DHA。除了從膳食中直接攝取外，人體亦可利用從植物油、母乳和配方奶中攝取的 $\alpha$ -亞麻酸自行製造DHA。

### 配方奶產品添加DHA的爭議

為了模擬母乳的成分(母乳中DHA平均佔脂肪酸的0.2至1.0%不等)，並考慮到相比起餵哺不含DHA配方奶的嬰兒，餵哺母乳的嬰兒血液中的DHA水平一般相對較高，有些配方奶生產商會在產品中添加含DHA的配料。

然而，配方奶添加DHA是否真的有利於嬰幼兒的生長發育，至今仍然莫衷一是。有研究指出直接攝取DHA對部分嬰兒，例如早產嬰有好處。亦有研究指在嬰兒配方奶添加DHA有助嬰兒短期內的視覺和神經發育。

然而，其他有關嬰兒的研究並沒有為上述益處提供佐證，亦沒有顯示嬰兒吃了添加DHA的配方奶會帶來長期的有利影響。對於兩歲或以上的幼兒，目前沒有足夠的證據證明，增加DHA攝取量能促進幼兒的體格或智力發展或對某項功能有益。因此，歐盟只允許描述DHA有助12個月以下嬰兒的正常視力發育的聲稱，而不允許描述DHA有益於非母乳餵哺嬰兒的腦部發育或12個月以上嬰幼兒的眼部發育的聲稱。

事實上，有意見認為配方奶產品中添加的DHA等營養素源自牛奶或其他配料(例如DHA是從海產油類中提取)，其構造和功能未必可與母乳中的成分相提並論。再加上身體可以自行把 $\alpha$ -亞麻酸製成DHA，食品法典委員會因此未有把DHA列為嬰兒和較大嬰兒配方奶產品的必需成分。

### 嬰幼兒攝取DHA的情況

理論上，大量攝取DHA或所攝取的DHA分量與其他脂肪酸的比例失衡，可能影響身體對其他

In the last issue, we introduced macronutrients in breastmilk and infant formula. In this issue, we will discuss docosahexaenoic acid (DHA), a nutrient often added to formula products for infants and young children.

### What is DHA?

DHA is a long-chain polyunsaturated fatty acid which has a critical role in normal retinal and brain development of foetus and the first two years of life. DHA presents in varying amounts in human breastmilk, fish oils, and marine algae. Apart from its dietary sources, the body can produce DHA from  $\alpha$ -linolenic acid, which is found in plant oils as well as breastmilk and infant formula.

### Controversy of Adding DHA in Formula Products

Some formula manufacturers add DHA-containing ingredients in their formula products. This is mainly to mimic the composition of breastmilk (mean DHA content ranges from 0.2-1.0% of fatty acids), and to take into consideration the typically higher blood level of DHA in breastfed infants than that in infants fed with formulae not containing DHA.



母乳餵哺對嬰兒最好 (由衛生署提供)  
Breastfeeding is best for babies (courtesy of the Department of Health)

However, when coming to the question about the actual benefit of adding DHA to formula products, the issue is still controversial. There are studies suggesting that some infants, such as premature infants, may benefit from direct consumption of DHA. Some studies also suggest that including DHA in infant formulae may have positive effects on visual function and neural development of infants over a short term.

However, other studies in infants do not confirm the above benefits, nor are there any long-term beneficial effects demonstrated. For children aged two or above, there is currently insufficient evidence to link increased intake levels of DHA to improved physical or mental development or specific functional benefits. As such, the European Union only accepts claims mentioning that DHA intake contributes to the normal visual development of infants up to 12 months, while claims mentioning function of DHA intake on brain development of non-breastfed infants or eye development for infants and children above 12 months are not accepted.

In fact, there are concerns that for nutrients added to formula products, including DHA, their structures and functions may not be the same as those present in breastmilk as they are extracted from cows milk or other ingredients (such as marine oils in the case of DHA). Therefore, taking into account that DHA could be synthesised in the body from  $\alpha$ -linolenic acid, the Codex Alimentarius Commission (Codex) does not consider DHA to be an essential composition of infant formula and follow-up formula products.

### DHA Intake in Infants and Young Children

Theoretically, when DHA is taken in large amount or inappropriate ratio

脂肪酸的代謝作用，以致身體多項功能受影響，例如腎功能、凝血和免疫反應等。

母乳餵哺的嬰兒一般沒有這方面的問題，因為他們通常可以從母乳中攝取恰當分量的DHA。至於嬰兒配方奶，添加DHA一般是可以接受的，因為這部分嬰兒的發育可能有利。食品法典委員會建議，如果在配方奶中添加DHA，除非技術所限，否則DHA的含量不能超過總脂肪量的0.5%，而且與特定脂肪酸須保持特定的比例，具體來說，即花生四烯酸(AA)的含量應至少達到DHA的同等濃度，而二十碳五烯酸(EPA)含量不應超過DHA。這個水平不會構成已知的重要安全問題，亦不會對嬰幼兒的發育造成不良影響。因此，如果市民想以添加DHA的配方奶餵哺嬰兒，便應選擇那些符合食品法典委員會建議的產品。

to other fatty acids, metabolism of other fatty acids in the body may be affected, which might eventually have impact on a number of body functions such as renal function, blood coagulation and immunological reactions.

However, this is normally not a concern to breastfed infants who can usually obtain the right amount of dietary DHA from breastmilk. For infant formula, in view of the possible benefits to certain babies, addition of DHA is generally acceptable. Codex recommends that DHA, if added, should normally not exceed 0.5% of total fat content unless due to unavoidable technical constraints and should be present in specific ratio to certain fatty acids, i.e. arachidonic acid (AA) content should reach at least the same concentration as DHA, and the content of eicosapentaenoic acid (EPA) should not exceed that of DHA. Such level does not pose any known major safety concern or adverse effects on growth. Therefore, when it is desired to feed infants with DHA added formula, it is advisable to choose one that fulfils the Codex recommendation.

食物事故點滴  
Food Incident Highlight

烈酒中的塑化劑

二零一二年十二月，食物環境衛生署接獲市民投訴一瓶標示為茅台的酒含塑化劑，該市民並提供一已開封的酒樣本。該樣本檢測出每公斤酒樣本含有2.8毫克的塑化劑鄰苯二甲酸二(2-乙基己酯)(DEHP)，超出食物所含DEHP的行動水平。風險評估結果顯示，對於烈酒飲用量一般及高的市民，通過飲用上述DEHP分量的烈酒不會超出世衛有關DEHP的安全參考值。

DEHP普遍用於聚氯乙烯(PVC)產品，使塑料更具彈性和耐用。食物含有DEHP，可能是因PVC食物接觸物料中的塑化劑遷移到食物中，又或食物受環境污染。DEHP的急性毒性低。

目前，國際上仍沒有烈酒中塑化劑的限量標準。食物安全中心(中心)在二零一一年處理台灣五類食品被攙雜塑化劑的事故時，把行動水平定於每公斤食物含1.5毫克DEHP。目前並無證據顯示有人故意在烈酒中摻入DEHP。由於烈酒並非一般香港市民日常的飲食，而且某些塑化劑(包括DEHP)較易溶解於酒精中，以上針對一般食物的行動水平不適用於烈酒。因此，中心根據風險評估的結果及參考歐洲國家的有關數據，為烈酒另訂行動水平為每公斤烈酒含5毫克DEHP。

酒精是一種致癌物質。喝酒對健康會構成即時和長遠的影響，亦會增加酒精中毒甚至死亡的風險。不飲酒人士不應開始飲酒。如選擇飲用酒精飲品，亦應節制以盡量減少酒精帶來的危害。

Plasticiser in Distilled Spirits

In December 2012, the Food and Environmental Hygiene Department received a food complaint that a bottle of Chinese distilled spirits labelled as Moutai contained plasticiser. Test result on the submitted sample in an unsealed bottle showed that it contained a plasticiser, di(2-ethylhexyl) phthalate (DEHP), at 2.8 mg/kg which exceeded the action level set for food. Risk assessment showed that the dietary exposure to DEHP by the average and high consumers of the distilled spirits at the detected level would not exceed the safety reference value established by the World Health Organization.

DEHP is widely used in polyvinyl chloride (PVC) products to improve flexibility and durability of the plastic material. It may be present in food due to migration from PVC food contact materials or as an environmental contaminant. DEHP has low acute toxicity.

Currently, there is no international standard for maximum limits of plasticisers in distilled spirits. The Centre for Food Safety (CFS) has set an action level of 1.5 mg/kg for DEHP in food during the food incident involving the adulteration of plasticisers in five categories of Taiwanese food in 2011. There is currently no evidence that DEHP has been added deliberately to distilled spirits. As distilled spirits are not considered as a normal part of the diet of the general population and some plasticisers (including DEHP) are highly soluble in alcohol, the action level for food might not be appropriate for distilled spirits. Taking into account the risk assessment result and relevant European data, the CFS has set a separate action level of 5 mg/kg for DEHP in distilled spirits.

Alcohol is a cancer-causing agent. Alcohol consumption has both immediate and long-term effects on health. It also increases the risk of intoxication, even death. Non-drinkers should not start drinking. For those who choose to drink alcoholic beverages, they should limit the amount of alcohol consumed to minimise alcohol-related harm.

風險傳達  
工作一覽  
Summary of  
Risk Communication Work

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