食物安全焦點
Food Safety Focus

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食物環境衞生署 Food and Environmental Hygiene Department

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二零一二年有關食肆及食物業的食物中毒個案回顧

Review of Food Poisoning Outbreaks Related to Food Premises and Food Business in 2012

食物安全中心
食物事故應變及管理小組
盧大威醫生報告

Reported by Dr. Dawin LO, Medical & Health Officer, Food Incidents Response & Management Unit, Centre for Food Safety

本文就二零一二年本港食肆及食物業的食物中毒個案作出回顧。

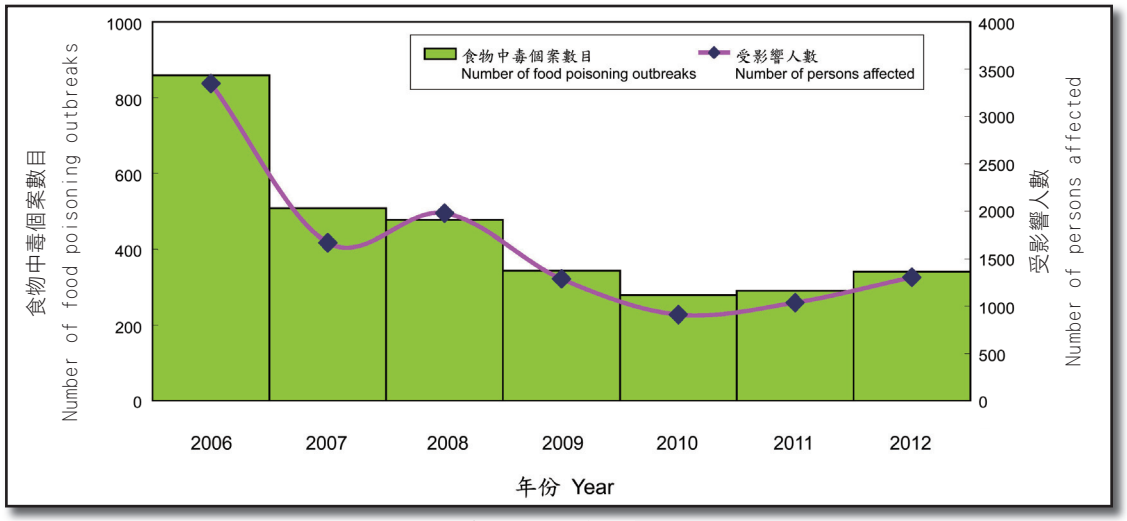
與本港食肆及食物業相關的食物中毒事件

食物安全中心（中心）專責調查及監控有關食肆及食物業的食物中毒個案。二零一二年，中心接獲341宗由衞生署轉介的懷疑食物中毒個案，共有1 304人受影響，數字較二零一一年的290宗個案及1 036人受影響有所上升（見圖一）。

This article reviews the food poisoning outbreaks related to food premises and food business in year 2012 in Hong Kong.

Food Poisoning Outbreaks Related to Local Food Premises and Food Business

The Centre for Food Safety (CFS) is responsible for the investigation and control of food poisoning outbreaks related to food premises and food business. In year 2012, the CFS received 341 referrals from the Department of Health (DH) on suspected food poisoning outbreaks that affected a total of 1 304 persons. The numbers have increased as compared with 290 outbreaks with 1 036 persons affected in 2011 (Figure 1).



圖一： 2006至2012年有關食肆／食物業的食物中毒個案數目及受影響人數
Figure 1. Number of food poisoning outbreaks related to food premises and food business and the corresponding number of persons affected from 2006 to 2012.

在二零一二年，超過80%個案由細菌引致；而其中涉及副溶血性弧菌的個案佔137宗(40%)，受影響有482人(37%)。另外，產氣莢膜梭狀芽孢桿菌和諾如病毒引起的食物中毒個案佔66宗(19%)，共有436人受影響(33%)，人數比往年顯著上升(見表)，值得留意以下兩宗在該年度懷疑涉及上述兩種病原體的個案。

Bacteria was the most common (over 80%) group of causative agents of the outbreaks in 2012. *Vibrio parahaemolyticus* was the commonest causative organism, accounting for 137 outbreaks (40%) with 482 persons (37%) affected. A substantial increase was noted in the number of persons affected (436 persons, 33%) in 66 outbreaks (19%) related to *Clostridium perfringens* and norovirus (see Table). Two clusters of outbreaks suspected to be caused by these two microorganisms drew special attention in 2012.

二零一二年食物中毒個案中最常見的三個成因分別是貯存溫度不當、生熟食物交叉污染和進食受污染的生吃食物。

Improper holding temperature, cross contamination by raw food and consumption of contaminated raw food were the top three contributory factors accounted for the outbreaks in 2012.

因貯存溫度不當而引起的食物中毒個案

產氣莢膜梭狀芽孢桿菌是一種能產生孢子的桿狀細菌，一般存在於肉類和家禽中。與這桿菌有關的食物中毒個案常發生在需要預先製

An Outbreak Related to Improper Holding Temperature

Clostridium perfringens is a spore-forming rod shape bacterium usually present in raw meat and poultry. Outbreaks of *Clostridium perfringens* often happen in food premises where food is prepared in large quantities and kept under inappropriate holding temperature for a prolonged period. Preventive measures depend on limiting the proliferation of the bacteria by cooking food thoroughly and keeping food at the safe temperatures, i.e. > 60°C or ≤ 4°C.

焦點個案
Incident in Focus

作大量食物，並長時間把食物存放在不適當溫度下的食物業處所。能預防這些食物中毒事故的方法是減少細菌滋生，包括把食物徹底煮熟，並存放在安全溫度內，即攝氏60度以上或攝氏4度或以下。

二零一二年十一月，有兩間位置相近的醫院同時發生集體食物中毒個案，共75名住院病人受影響。部分患者的糞便樣本經化驗證實含產氣莢膜梭狀芽孢桿菌。根據流行病學資料顯示，涉及的食物是由一間食物製造廠供應。調查結果顯示，負責該兩間醫院病人膳食的廚房在翻熱食物後，把食物存放在流動保溫餐車內超過兩小時，然後才運送到病房。調查發現有些食物保溫餐車在運作時溫度低於攝氏60度。本中心已要求該廚房需遵循良好衛生守則，尤其是要注意存放食物的正確溫度。其後本中心再沒有收到新的個案。

因食用高風險食物而引致的食物中毒個案

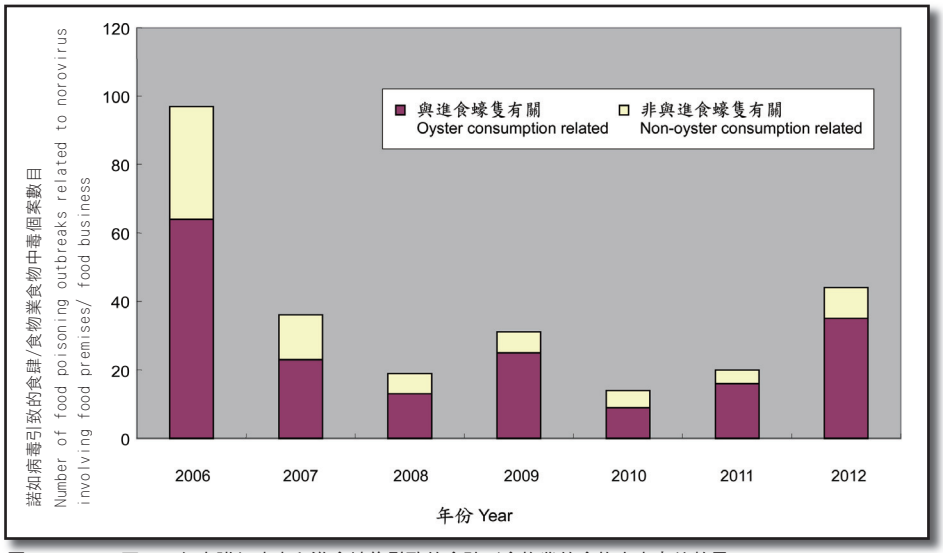
諾如病毒是全球病毒性食物中毒的主要致病原。在香港，大部分與諾如病毒相關的食物中毒個案都是跟進食蠔隻有關(見圖二)。蠔可受到諾如病毒污染，把蠔徹底煮熟才可以消滅藏於蠔隻體內的病毒。

二零一二年十一月，本中心接獲衞生署轉介16宗食物中毒個案，受影響的41人均曾於某酒店進食生蠔。在有關酒店抽取的蠔隻樣本對諾如病毒測試呈陽性反應。與此同時，本中心亦發現有另一間酒店的食物中毒個案亦與進食生蠔有關，該酒店抽取的蠔隻樣本對諾如病毒測試也同樣呈陽性反應。追查之下發現這些蠔隻全部採自英格蘭一個養蠔場。本中心指示分銷商回收由該養蠔場出產的蠔，以及停止進口產自該地區的蠔隻，並把事件知會英國駐香港總領事館。在採取以上控制措施後，本港再沒有出現相關的個案。

2011及2012年食肆／食物業食物中毒個案的病因一覽表(按受影響人數由高至低排序)
Table: The causative agents of food poisoning outbreaks related to food premises and food business in 2011 and 2012 (in descending order of number of persons affected)

種類 Group	病因 Causative agents	2011年個案數目 (受影響人數) Number of cases in 2011 (Number of persons affected)	2012年個案數目 (受影響人數) Number of cases in 2012 (Number of persons affected)
細菌 Bacteria	副溶血性弧菌 *Vibrio parahaemolyticus*	98 (332)	137 (482)
細菌 Bacteria	產氣莢膜梭狀芽孢桿菌 *Clostridium perfringens*	8 (28)	22 (233)
病毒 Viruses	諾如病毒 Norovirus	20 (98)	44 (203)
細菌 Bacteria	沙門氏菌 *Salmonella* spp.	57 (282)	53 (161)
細菌 Bacteria	金黃葡萄球菌 *Staphylococcus aureus*	30 (83)	36 (86)
細菌 Bacteria	蠟樣芽胞桿菌 *Bacillus cereus*	17 (72)	23 (66)
生物毒素 Biotoxins	雪卡毒素、組胺等 Ciguatoxins, histamine, etc.	27 (60)	9 (24)
化學物 Chemicals	亞硝酸鹽、草酸鈣等 Nitrite, calcium oxalate, etc.	11 (13)	5 (6)

A major food poisoning case involving 75 in-patients of two nearby hospitals was received in November 2012. Stool specimens of some affected persons yielded *Clostridium perfringens*. Epidemiological information revealed that the incriminated food items were provided by a food factory. Review of the food manufacturing process showed that the same kitchen facility was used to reheat all the cooked dishes supplied to the two hospitals. The food was then kept warm for more than two hours in mobile heated holding cabinets before they were delivered to the hospital wards. It was noted that some of these cabinets used for keeping and transporting food to the patients were found to have its operation temperature at below 60°C. We instructed the kitchen to follow good hygiene practices, particularly keeping the dishes at proper holding temperature. No further related cases were reported afterwards.



圖二： 2006至2012年由諾如病毒和進食蠔隻引致的食肆／食物業的食物中毒事件數目
Figure 2. Number of food poisoning outbreaks involving food premises and food business related to norovirus and consumption of oysters from 2006 to 2012.

An Outbreak Related to Consumption of High Risk Food

Norovirus has been an important cause of viral food poisoning around the world. In Hong Kong, a majority of food poisoning outbreaks of norovirus were related to the consumption of oysters, which could be contaminated by norovirus (Figure 2). The virus in oysters can be killed through proper cooking.

In November 2012, we received 16 clusters of food poisoning cases affecting 41 persons from the DH related to the consumption of raw oysters in a hotel. Investigation revealed that oyster samples taken from that hotel were tested positive for norovirus. At the same time, a similar case involving another hotel was found related to consumption of raw oysters and oyster samples collected at that hotel were also tested positive for norovirus. Source tracing found that they were harvested from an oyster farm in England. The CFS instructed the distributor to recall all oysters originated from the farm concerned, and suspend import of oysters from the affected area. The British Consulate General was informed about the incident. No further related cases occurred afterwards.

總結

二零一二年的食物中毒個案數目和受影響人數均有所增加。去年多宗中毒個案與食物貯存溫度不當和進食高危食物有關，所以我們應實踐“食物安全五要點”，以預防食物中毒。

Conclusion

An increase in the numbers of outbreaks and persons affected was observed in 2012. Consuming high risk food and keeping food at inappropriate temperature caused many food poisoning outbreaks last year. We should adhere to and practise the “Five Keys to Food Safety” to avoid occurrence of food poisoning.

食物安全平台
Food Safety Platform

配方奶產品和嬰幼兒預先包裝食品中的微量營養素
Micronutrients in Formula Products and Prepackaged Foods for Infants and Young Children

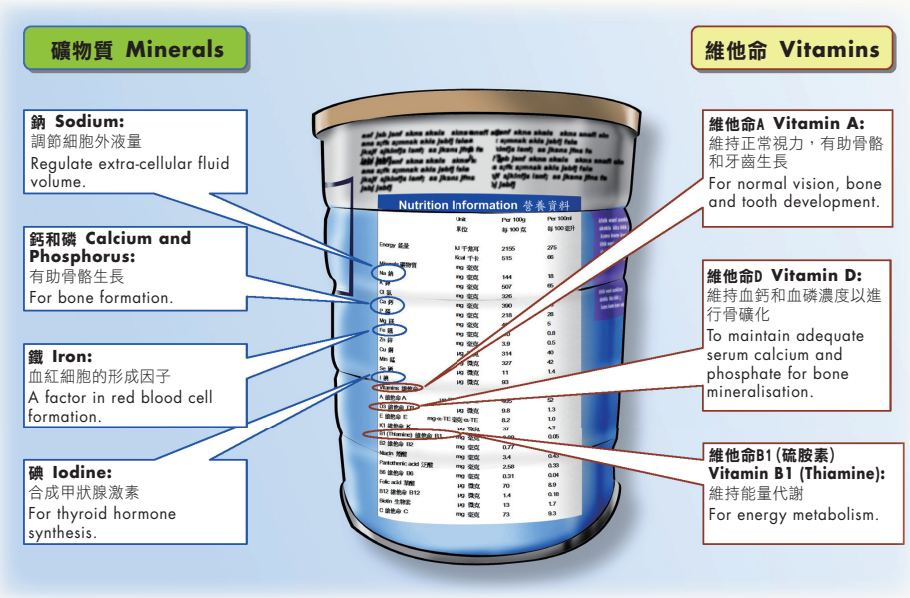
食物安全中心
風險評估組
林伏波博士報告

Reported by Dr Violette LIN, Scientific Officer,
Risk Assessment Section,
Centre for Food Safety

我們在上兩期探討了0至36個月嬰幼兒配方奶產品中的常量營養素和DHA。這期我們會談談這些產品和供6至36個月嬰幼兒食用的預先包裝食品中的維他命和礦物質，作為補充(斷奶期)食品或均衡正餐的一部份的問題。

維他命和礦物質的最佳攝取量

維他命和礦物質屬於微量營養素，雖然需要量很少，卻是人體生長發育和維持正常運作必不可少的營養素。嬰幼兒正處於快速生長期，他們這時候的體型雖小，身體卻需要較多微量營養素以促進發育。哺乳的母親只要營養充裕，母乳中的微量營養素一般可以滿足零至六個月大嬰兒的需要。而6至24個月是孩子學習進食固體食物的過渡期，他們開始和家人一起進食正餐，從均衡及多樣化飲食中攝取足夠的營養。



配方奶產品中部分維他命和礦物質的功用
Functions of some vitamins and minerals provided in a formula product.

世界衛生組織建議，嬰兒出生後首六個月應該純以母乳餵哺。之後在哺乳的同時開始添加補充食物，直至孩子兩歲或以上。如果母親因種種原因而選用配方奶產品(包括嬰兒配方奶及較大嬰兒配方奶)代替母乳餵哺，或父母／照顧者因方便購買現成的斷奶期食品，而不自製食物，便須留意這些產品中的營養素含量，因為某些微量營養素過多與不足對身體同樣有害。舉例來說，鈉攝取過多會使血液中鈉的濃度太高而出現脫水，另外口味傾向越來越嗜鹹，長此以往，血壓便會升高。

選購配方奶產品

母乳是嬰兒的最佳食品，所以配方奶產品的營養成分組合均盡可能接近母乳。生產商在生產配方奶時須遵循國家或國際標準。食品法典委員會為部分維他命和礦物質釐定了最低和最高含量，並要求生產商在嬰兒配方奶及較大嬰兒配方奶的標籤上標明有關含量。

0至6個月的嬰兒：所有嬰兒配方奶作為足月嬰兒唯一的營養來源時，其成分組合必須能夠滿足他們的正常營養需求。除非孩子患病，需要食用特殊配方奶，否則父母／照顧者可選擇任何一款符合食品法典委員會標準的嬰兒配方奶。

6至36個月的嬰幼兒：當孩子進食補充食品的分量和種類足夠時，便可減少喝奶。6至12個月大的嬰兒既可繼續食用嬰兒配方奶，亦可以改吃符合國家或國際機構(包括食品法典委員會)標準的較大嬰兒配方奶。

選購預先包裝斷奶期食品

衛生署和多個海外衛生當局一樣，建議市民自製幼兒斷奶期

In the previous issues, we have discussed the macronutrients and docosahexaenoic acid (DHA) in formula products for infants and young children (0-36 months). In this issue, we will look at vitamins and minerals in these products and in prepackaged foods for children aged 6-36 months as complementary (weaning) foods or part of a well-balanced diet.

Optimal Intake of Vitamins and Minerals

Vitamins and minerals are micronutrients, that are needed in small amounts but are essential for growth, development and normal body functions. During infancy and early childhood, the requirement for micronutrients is high relative to their body size to meet the need for rapid growth and development. A well-nourished lactating mother will generally provide adequate micronutrients for full-term infants 0-6 months through breastmilk. Children 6-24 months enter the stage of transitional feeding. They progress to having regular family meals and eating a balanced diet of variety and quality to obtain optimal nutrients.

The World Health Organization recommends infants to be exclusively breastfed for the first six months of life, and thereafter receive complementary foods while breastfeeding continues for up to two years of age or beyond. When mothers choose formula products (include infant formula and follow-up formula) over breastfeeding for various reasons, and parents/caregivers choose commercial over home-made weaning foods for convenience sake, they should be aware that too much of some nutrients in these products is as harmful as not enough. For example, excessive sodium intake may lead to dehydration as a result of high blood sodium levels, a tendency to prefer salty food and elevated blood pressure in the long run.

Choose a Formula Product

Formula products are essentially formulated with reference to the nutritional composition of breastmilk which is considered the best for babies. Manufacturers have to adhere to the national or international standards. The Codex Alimentarius Commission (Codex) sets the minimum and maximum levels of some vitamins and minerals, and requires manufacturers to declare their contents on the label of both formulae.

Infants 0-6 months: All infant formulae shall have a composition meeting the normal nutritional requirements of full-term infants when used as the sole source of nutrition. Parents/caregivers may choose anyone meeting the Codex requirement unless a child has a medical condition that requires a special formula.

Children 6-36 months: As a substantial amount and a variety of complementary foods are consumed, milk intake can be decreased. Infants 6-12 months of age can continue to consume infant formula, or follow-up formulae meeting the national or international requirements including the Codex.

Choose a Prepackaged Weaning Food

The Department of Health (DH) and many overseas health authorities recommend the use of home-prepared weaning foods over the commercial

的食物，因為家庭自製的食物在味道、形狀、顏色和口感方面的變化遠勝現成的斷奶期食品，亦能減少他們日後“揀飲擇食”的情況。相反，現成的樽裝／盒裝斷奶期食品無論是口感還是味道的選擇亦較為有限。

至於微量營養素，食品法典委員會對6至36個月嬰幼兒食用的所有穀基類(例如米做的奶米粉、粥、甜麵包乾／牙仔餅和餅乾)和其他食品(例如果汁／果蓉)的**鈉**含量設有上限；對所有穀基類食品的**維他命B1**含量亦有所規定；另外亦為部分穀基類食品的**鈣**、**維他命A**及／或**維他命D**含量設立了標準。市民應細閱營養標籤，以作出更佳選擇。

父母／照顧者可瀏覽衞生署網頁，參閱有關寶寶飲用配方奶的建議及如何自製補充食物。

ones in the transition to a family diet consisting of foods with a variety of tastes, appearances, flavours and textures. This can also help reduce the likelihood of children becoming fussy eaters. Conversely, commercial weaning foods in jars/packets may have limited textures and flavours.

As for micronutrients, the Codex has requirements on the maximum level of **sodium** for all cereal-based (e.g. rice-based milk cereal, congee, rusks, biscuits) and other (e.g. fruit juice/puree) foods for children aged 6-36 months. Requirements on **vitamin B1** level are also provided for all cereal-based foods; whereas requirements on **calcium**, **vitamins A** and/or **D** level are given to some cereal-based foods. Read the nutrition label to make a better choice.

Parents/caregivers may visit the DH's website for recommendations on formula milk feeding for young children and preparation of home-made commentary food.

食物事故點滴
Food Incident Highlight

英國牛肉意大利千層麵含馬肉

食物安全中心(中心)上月接獲歐洲聯盟委員會之食品和飼料快速預警系統的通報，指英國一公司在自家品牌的牛肉意大利千層麵檢測到馬肉基因。中心隨即發出食物警報，並一方面把消息通知業界，一方面派員到零售點巡查有否出售問題產品。香港的進口商已自願回收受影響產品。

自爆出首宗牛肉製品含馬肉和其他肉類的事件後，風波蔓延至歐洲各地，多國食物安全當局已就事件展開調查。但是，目前沒有證據顯示食用這些摻雜了馬肉的牛肉產品有損健康。

英國和愛爾蘭的食物安全當局勒令食物業檢測牛肉製品是否含馬肉，檢測結果呈陽性的產品已全部下架。中心會繼續密切監察事態進展，並與有關海外食物安全當局保持聯絡，在有需要時採取進一步行動。

受影響的牛肉意大利千層麵
The affected beef lasagne product

Horse Meat in British Beef Lasagne

Last month, the Centre for Food Safety (CFS) issued a food alert after receiving notification from the Rapid Alert System for Food and Feed (RASFF) of the European Commission that a British company detected horse DNA in its beef lasagne products. The CFS alerted the trade and conducted sales checks at retail outlets. The affected products were voluntarily recalled by the importer in Hong Kong.

Since the first report of the incident, adulteration of beef products with horse meat and other meats have been reported in a number of European countries. National food safety authorities of a number of countries have launched investigation into the issue. So far, there has been no evidence that the consumption of beef products adulterated with horse meat would pose a food safety risk to human health.

Food safety authorities in United Kingdom and Ireland have ordered food businesses to test their beef products. All products with positive results have been withdrawn from the market. The CFS will continue to closely monitor the development of the situation and liaise with relevant overseas food safety authorities on the appropriate actions to be taken.

新西蘭奶製品含雙氰胺

部分新西蘭奶製品上月意外地檢出含少量雙氰胺(DCD)後，食物安全中心對有關產品進行了風險評估，結論是按這些奶製品檢出的雙氰胺含量，在正常食用情況下，並不存在食物安全風險。

雙氰胺是一種低毒性的化學物。農民在牧場使用雙氰胺，目的是減少硝酸鹽流入水道，以及降低農耕，尤其是畜牧活動所排放的溫室氣體，同時還可促進牧草生長。動物吃了這些噴灑過雙氰胺的牧草後，奶中有可能含有雙氰胺殘餘。

目前食品法典委員會還沒有就食物中的雙氰胺殘餘制定標準。為安全起見，新西蘭雙氰胺製造商已自願暫停銷售和在牧場使用雙氰胺。

Dicyandiamide (DCD) in New Zealand Milk Products

Last month, following the unexpected detection of low levels of dicyandiamide (DCD, also known as 2-cyanoguanadine) in some New Zealand milk products, the Centre for Food Safety evaluated the possible risk associated with the concerned products and found that normal consumption of milk products with DCD at the levels detected posed no food safety risk.

DCD is a chemical of low toxicity. It is used on farm land to reduce nitrate leaching to waterways and greenhouse gas emissions from farming, dairying in particular, as well as to promote pasture growth. Residues of DCD might be present in milk of animals when they graze on pastures where DCD has been applied.

Currently, no standard has been set for DCD residues in food by the Codex Alimentarius Commission. As a precautionary measure, manufacturers of DCD have voluntarily suspended sales and use of the chemical on farm land in New Zealand.

風險傳達工作一覽
Summary of Risk Communication Work

風險傳達工作一覽（二零一三年二月） Summary of Risk Communication Work (February 2013)	數目 Number
事故/食物安全個案 Incidents / Food Safety Cases	66
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