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

二零零七年七月 · 第十二期 July 2007 · 12th Issue

食物環境衞生署食物安全中心出版 Published by the Centre for Food Safety, Food and Environmental Hygiene Department

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食物安全中心 風險評估組研究主任 馬嘉明女士報告

Reported by Ms. Janny MA, Research Officer, Risk Assessment Section, Centre for Food Safety

食物中的李斯特菌

海外國家不時發生涉及單核細胞增生李斯特氏菌*污染的食物事故。今年一月至六月，食物安全中心(中心)透過內地、澳洲、新西蘭、英國及美國食物安全當局的網頁找出約20宗這類事故，並因應情況迅速作出回應，包括與有關當局聯絡，呼籲零售商停售問題食品以及提醒市民切勿進食問題食品。

李斯特菌與李斯特菌病

李斯特菌屬包括七個品種，全部屬於革蘭氏陽性無芽胞兼性厭氧菌，在環境中幾乎無處不在。不過，單核細胞增生李斯特氏菌是唯一可令人致病的品種。此菌的最佳繁殖溫度約為攝氏37度。與其他致病菌不同，它們亦可在攝氏0度的環境下慢慢繁殖。

專家普遍認為，李斯特菌病主要從飲食途徑感染李斯特菌所致。不過，此病在本港並非常見的疾病，過去三年有20多宗證實個案。

規控食物中的李斯特菌

中心在進口、批發及零售層面定期監察食物以確保食物安全，並採用不同參數(包括單核細胞增生李斯特氏菌)，對即食食品進行微生物監察。今年一月至五月，中心對70多個即食食品樣本進行李斯特菌測試，全部令人滿意(即在25克食物樣本內沒有發現)。此外，中心監察食物事故，包括涉及李斯特菌污染的海外事故，並在有需要時採取適當行動。

為了協助當局規控食物安全及方便業界制定改善食物安全的措施，中心於二零零二年制定即食食品微生物含量指引(指引)，並在徵詢食品微生物安全專家小組的微生物專家意見後，於今年作出修訂。經修訂的指引已於五月發出，當中規定所有即食食品的李斯特菌含量限值為每克食物樣本少於100個菌落形成單位，但(i)冷藏食品(不包括冰凍即食食品)及(ii)嬰兒食品則除外。這兩類食品的含量限值訂為“在25克食物樣本內沒有發現”。

三方合作控制食物中的李斯特菌

確保食物安全需要政府、業界及消費者三方的合作。除了政府致力監察及規控食物安全的工作外，業界在生產安全食物方面亦扮演重要角色。他們應執行優良製造規範，並遵從指引所訂的李斯特菌含量限值，以確保所生產的食物可供安全食用。此外，市民應奉行良好的食物及個人衞生習慣，而容易受李斯特菌感染的群組如孕婦、長者和免疫力較弱的人士等則應避免進食高風險食物。

**在本港，單核細胞增生李斯特氏菌通常簡稱為李斯特菌。*

Listeria monocytogenes in Food

Food incidents concerning *Listeria monocytogenes* contamination occur in overseas countries from time to time. From January to June 2007, the Centre for Food Safety (CFS) identified about 20 of such incidents from various websites of food safety authorities in the Mainland, Australia, New Zealand, the United Kingdom and the United States. The CFS responded to these food incidents promptly by contacting relevant authorities, making appeal to retailers to stop selling and warning the public not to consume the affected products as appropriate.

Listeria monocytogenes and Listeriosis

The genus *Listeria* consists of seven species of gram positive, non-spore forming facultative anaerobes, which are found almost everywhere in the environment. However, *Listeria monocytogenes* is the only human illness causing species. Such bacteria have an optimum growing temperature of around 37°C. Unlike other pathogens, it can also grow slowly at 0°C.

It is widely recognised that listeriosis is principally attributable to foodborne transmission of *Listeria monocytogenes*. However, listeriosis is not a common disease in Hong Kong with some 20 confirmed cases in the past 3 years.

Control of *Listeria monocytogenes* in Food

The CFS conducts regular food surveillance at import, wholesale and retail levels to ensure food safety. For ready-to-eat food, microbiological monitoring using various parameters including *Listeria monocytogenes* is carried out. From January to May 2007, the CFS tested some 70 samples of ready-to-eat food for *Listeria monocytogenes* and all were satisfactory (i.e. not detected in 25g). Besides, the CFS monitors food incidents including those involving *Listeria monocytogenes* contamination occurred in other countries and takes appropriate actions if necessary.

To assist officers in food safety control and facilitate the trade in devising measures to enhance food safety, the CFS developed a set of Microbiological Guidelines for Ready-to-eat Food (the Guidelines) in 2002 and revised it in 2007, in consultation with microbiological experts of the Expert Panel on Microbiological Safety of Food. The revised Guidelines issued in May 2007 stipulate the *Listeria monocytogenes* limit for all ready-to-eat food at less than100 colony-forming units per gram (cfu/g) except for (i) food under refrigeration (excluding frozen food) and (ii) food intended for infants, where a “not detected in 25g” limit is set.

Tripartite Collaboration to Control *Listeria monocytogenes* in Food

Ensuring food safety requires tripartite collaboration – the government, the trade and consumers. Apart from government’s effort in monitoring and controlling food safety, the trade also has a vital role to play in producing safe food. They should put Good Manufacturing Practices in place and observe the *Listeria monocytogenes* limits set in the Guidelines so as to ensure the food they produce is safe for consumption. Besides, members of the public should

焦點個案
Incident in Focus

須符合“在25克食物樣本內沒有發現”李斯特菌的食物例子
Examples of foods that have to meet the "not detected in 25g" limit for *Listeria monocytogenes*

椰菜絲沙律
Coleslaw

左圖：乳酪；
右圖：牛奶
Left: Yoghurt; Right: Milk

軟芝士
Soft cheese

切片火腿
Sliced ham

嬰兒食品
Baby food

了解更多現行指引

問1.為什麼要制定這些準則？

答1.中心參考最新的科學證據及國際做法制定這些準則。採用“完全不容許”的模式規管所有即食食品中的李斯特菌，一直受各國食品技術專家及科學家批評。他們認為，根據最新的科學證據，有關模式過於謹慎。由國際組織進行並於近年發表的一項風險評估研究指出，大部分李斯特菌病個案與進食李斯特菌含量不符合現行標準的食物有關，不管有關標準是完全不容許含有該菌或每克食物樣本少於100個菌落形成單位。此外，有些研究顯示，某些食物較多涉及李斯特菌病，而某些人又較容易受感染。由於李斯特菌無處不在，難以確保各類即食食品均完全不含此菌。對低風險食物採取有限度容許的政策，可令工作和資源集中在可能對公共衞生有更大效益的範疇上。澳洲、加拿大及英國等已發展國家對李斯特菌採取的規管模式亦是對高風險食物訂定較嚴格的規定，但對其他食物類別則訂出含量限值為每克食物樣本少於100個菌落形成單位，因而可以更有效地分配資源。

問2.為何對即食食品訂有兩個不同含量限值？

答2.許多種類的食物可能會受李斯特菌污染。不過，此菌對不同群組有不同的健康風險。

冷藏(不包括冰凍)即食食品對人類的風險較高，因為李斯特菌會在冷藏溫度繁殖，如有充足時間，其數量可達感染劑量。另一方面，可存放在室溫的即食食品，因其環境不利細菌(包括李斯特菌)的繁殖，一般可耐於保存。在冰凍環境下，李斯特菌無法繁殖，故此，存放在非冷藏溫度的食物(包括冰凍食物)的風險較低，因而訂定較寬鬆的含量限值，即每克食物樣本少於100個菌落形成單位。

此外，嬰兒較易受李斯特菌感染，因此，中心對即食嬰兒食品採用嚴格的模式，即“在25克食物樣本內沒有發現”。

問3.現行指引會影響李斯特菌的個案數字嗎？

答3.根據現有的科學證據，把低風險食物的李斯特菌含量限值訂為每克食物樣本少於100個菌落形成單位，預計不會引致李斯特菌病發病率上升。

更多資料

如欲獲得有關李斯特菌及指引的更多資料，請瀏覽下列網頁：

- 中心編製有關李斯特菌的單張
- 中心出版的食物安全焦點(二零零七年三月)
- 中心發出的即食食品微生物含量指引
- 中心有關即食食品微生物含量指引的常見問題

practise sound food and personal hygiene, and the susceptible populations including pregnant women, the elderly and those with lowered immunity, should avoid the consumption of high risk food.

More About the Current Guidelines

Q1.What are the rationales for setting such criteria?

A1.The CFS sets the criteria with reference to the best available scientific evidence and international practices. The "zero tolerance" approach to regulate *Listeria monocytogenes* in all ready-to-eat foods has been criticised by food technologists and scientists internationally and was considered as an over-cautious approach in light of the latest scientific evidence. Recent risk assessment study conducted by international authorities revealed that most listeriosis cases were associated with the consumption of foods that did not meet current standards for *Listeria monocytogenes*, regardless of whether the standard was zero tolerance or less than 100 cfu/g. Studies also showed that certain foods were more likely to be implicated in listeriosis and certain populations were more susceptible to the infection. Due to the ubiquitous nature of *Listeria monocytogenes*, it would be difficult to maintain its absolute absence in all kinds of ready-to-eat food. Adopting a non-zero tolerance policy for low risk foods will allow efforts and resources to be focused on areas that may have greater health benefit. Developed countries like Australia, Canada and the United Kingdom have also adopted an approach of control on *Listeria monocytogenes* by having a more stringent requirement towards high risk foods and a limit of less than100 cfu/g for other types of foods, resulting in better resource allocation.

Q2.Why are there two different limits for ready-to-eat food?

A2.A wide range of food may be contaminated by *Listeria monocytogenes*. However, they pose different health risks to different populations.

Ready-to-eat foods kept under refrigeration (excluding frozen condition) pose higher risk to human because *Listeria monocytogenes* can grow at refrigeration temperatures and its number may reach infectious dose if given sufficient time. On the other hand, ready-to-eat foods that can be stored at room temperature are likely to be shelf-stable where the conditions do not support the growth of bacteria including *Listeria* monocytogenes. Under frozen condition, *Listeria monocytogenes* is unable to multiply. Therefore, foods kept at temperatures other than refrigeration (including frozen food) are at lower risk and thus subject to less stringent limit i.e. less than100 cfu/g.

Moreover, infants are more susceptible to *Listeria monocytogenes* infection. Therefore the CFS takes a stringent approach "not detected in 25g" towards ready-to-eat products intended for infants.

Q3.Will the current Guidelines affect the occurrence of listeriosis?

A3.Based on current available scientific evidence, setting a *Listeria monocytogenes* limit for low risk items at less than100 cfu/g is not expected to result in increased number of listeriosis incidence.

Further Information

Further information about *Listeria monocytogenes* and the Guidelines can be obtained from the following webpages:

- The CFS Pamphlet on Listeria
- The CFS Food Safety Focus (March 2007)
- The CFS Microbiological Guidelines for Ready-to-eat Food
- The CFS Frequently Asked Questions on Microbiological Guidelines for Ready-to-eat Food

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

風險傳達工作一覽（二零零七年六月） Summary of Risk Communication Work (June 2007)	數目 Number
事故/食物安全個案 Incidents / Food Safety Cases	72
公眾查詢 Public Enquiries	142
食物投訴 Food Complaints	390
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食物安全平台
Food Safety Platform

海產中的天然有毒物質
Natural Toxic Substances in Seafood

食物安全中心風險評估組 研究主任鄧紹平博士報告
Reported by Dr. Anna S.P. TANG, Research Officer, Risk Assessment Section, Centre for Food Safety

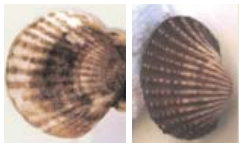
東星斑
Leopard coral grouper

杉斑
Flowery grouper

油鮶
Moray eel

老虎斑
Tiger grouper

蠔
Oyster



左圖：扇貝；
右圖：蛤(蜊蚶)
Left: Scallop; Right: Cockle

引言

世界各地不時發生因天然物質引致的海產中毒個案，當中大部分是由海產體內的雪卡毒素及其他貝類毒素所致。這兩類毒素由某些微藻類所產生，並經過食物鏈積聚在部分珊瑚魚及貝類等海洋生物體內，統稱為藻類毒素。除了藻類毒素外，海產體內的其他天然有毒物質包括河豚中的河豚毒素，以及鯖魚中由細菌性腐壞過程轉化而成的組胺。

藻類毒素及有毒藻類

藻類毒素可由生長在溫帶或熱帶氣候的藻類(例如雙鞭毛藻和硅藻)產生。並非所有藻類或微藻類都有毒。事實上，在超過 5 000 個海洋藻類品種中，只有 70 多個已知會產生毒素。在某些環境條件下，有毒或無毒藻類會迅速生長，造成藻類暴發性地大量繁殖(又稱為紅潮)。如紅潮涉及有毒藻類，海產便可能受污染。

可引致海產中毒的藻類毒素 —— 雪卡毒素及貝類毒素

由有毒微藻類產生的藻類毒素可經由海洋食物鏈積聚在各種海洋生物體內。人們如吃下大量這類毒素，可出現中毒症狀，包括腸胃及神經系統不適。現時並無解毒劑可消解藻類毒素，而有關療法主要屬於支持性質。根據衞生防護中心的統計數字，由一九九七至二零零六年，本港有385宗雪卡毒素中毒報告，受影響人數為 1 356 人，及另有69宗貝類中毒報告，受影響人數為145人。

某些較常積聚雪卡毒素的珊瑚魚，有較高風險引致中毒。一般而言，魚類體型越大，毒素含量越高。魚卵、魚肝、魚腸、魚頭及魚皮是雪卡毒素積聚的部位。

雙貝類屬於可引致貝類毒素中毒的高危食物。此外，一些甲殼類動物(例如蟹)、腹足類動物(例如蛾螺)及魚類亦曾導致貝類毒素中毒，但此情況較少發生。貝類毒素在受污染貝類的內臟含量較高。視乎毒素性質及臨牀症狀，常見貝類毒素中毒主要有四類(見表一)。在本港，痲痺性貝類中毒是最常呈報的貝類毒素中毒類別，其次依序為神經性貝類中毒及下痢性貝類中毒，而扇貝是最常涉及的食品。

河豚毒素中毒

河豚毒素是一種毒性強烈的海洋生物毒素，存在於魨形科魚類體內，並集中在卵巢(卵子)、魚肝、魚腸及魚皮。經常涉及河豚毒素中毒的魚類有河豚及刺規，但牠們並非所有品種均含有毒素。雖然原因不明，但專家相信河豚毒素很可能是由經常與海洋生物有關的海洋細菌所產生。由一九九七至二零零六年，本港有8宗河豚毒素中毒報告，受影響人數為15人。面部及手腳感覺異常、眩暈和痲痺是河豚毒素中毒的典型症狀，嚴重個案可引致死亡。

Introduction

Around the world, cases of seafood poisoning occur from time to time due to the presence of naturally occurring substances. Poisoning from ciguatoxin and other shellfish toxins present in seafood constitutes the majority of these cases. These toxins, produced by certain types of microalgae and accumulated in species such as some coral reef fish and shellfish along the food chain, are collectively known as phycotoxins. Besides phycotoxins, other natural toxic substances present in seafood include tetrodotoxin in puffer fish, and histamine, a conversion product of bacterial spoilage in scombroid fish.

Phycotoxins and Toxic Algae

Phycotoxins may be produced by algae in both temperate and tropical climate, such as dinoflagellates and diatoms. Not all algae or mircoalgae are toxic. In fact, of over 5 000 species of marine algae, only about 70 or more species are known to produce toxins. Under certain environmental conditions, algal blooms or red-tide can occur as a result of rapid multiplication of toxic or non-toxic algae. When toxic algae are involved in a red tide, seafood contamination is possible.

Phycotoxins Causing Seafood Poisoning – Ciguatoxin and Shellfish Toxins

Through the marine food chain, phycotoxins produced by toxic microalgae may accumulate in a variety of marine species. Upon ingestion by human in significant amounts, these toxins may cause poisoning with various gastrointestinal and neurological effects. At present, there are no antidotes against these phycotoxins and medical treatment is mainly supportive. According to statistics from the Centre for Health Protection, 385 cases of ciguatoxin poisoning affecting 1 356 people, and 69 cases of shellfish poisoning affecting 145 people were reported in Hong Kong from 1997 to 2006.

Certain coral reef fish which commonly accumulate ciguatoxins are of high risk for ciguatera fish poisoning. In general, the larger the fish, the higher is the level of toxin. Fish roe, liver, guts, head and skin are parts of the fish where ciguatoxins are concentrated.

Bivalve shellfish are high risk food items for shellfish toxin poisoning. Though less common, crustaceans (e.g. crabs), gastropods (e.g. whelks) and finfish have also been incriminated. Concentrations of shellfish toxins are higher in the viscera of contaminated shellfish. Based on the nature of the toxin and clinical symptoms, four major types of shellfish toxin poisoning are commonly encountered (see Table 1). In Hong Kong, paralytic shellfish poisoning is the most commonly reported shellfish toxin poisoning, followed by neurotoxic shellfish poisoning and diarrhoetic shellfish poisoning; scallop is the food item most frequently implicated.

表一 由藻類毒素引致的主要海產中毒類別
Table 1 Major types of seafood poisoning caused by phycotoxins

中毒類別 Type of poisoning	通常涉及的海產 Seafood commonly involved	主要症狀 Characteristic Symptoms	主要分布水域 Common regions
雪卡毒素中毒 Ciguatera fish poisoning	珊瑚魚(本港常見品種：東星斑、紅鰭、燕尾星斑、西星斑、油鯇、杉斑、老虎斑及蘇眉) Coral reef fish (Species of local relevance: leopard coral grouper, two-spot red snapper, lyretail grouper, flowery grouper, moray eel, spotted coral grouper, tiger grouper and humphead wrasse.)	口部及四肢痲痺、嘔吐、腹瀉、關節及肌肉疼痛 Numbness of the mouth and limbs, vomiting, diarrhoea, pain of joints and muscles	太平洋及加勒比海 Pacific and the Caribbean
痲痺性貝類中毒 Paralytic shellfish poisoning (PSP)	雙貝類(扇貝、帶子、青口、蠔、蜆、蛤)；扁蟹 Bivalve shellfish (scallops, mussels, oysters, clams, cockles); xanthid crabs	由輕微刺痛／痲痺至呼吸停頓 Varies from slight tingling/ numbness to respiratory paralysis	熱帶及溫帶氣候帶 Tropical and moderate climate zones
神經性貝類中毒 Neurotoxic shellfish poisoning (NSP)	雙貝類(蠔、蜆、青口、蛤)；蛾螺 Bivalve shellfish (oysters, clams, mussels, cockles); whelks	感覺異常、冷熱感覺顛倒、動作不協調 Paraesthesia, reversal of hot and cold sensation, uncoordinated movements	墨西哥灣、佛羅里達州東岸、西大西洋、西班牙、葡萄牙、希臘、日本、新西蘭 Gulf of Mexico, East coast of Florida, West Atlantic, Spain, Portugal, Greece, Japan, New Zealand
下痢性貝類中毒 Diarrhoetic shellfish poisoning (DSP)	雙貝類(青口、扇貝、帶子、蠔、蜆) Bivalve shellfish (mussels, scallops, oysters, clams)	腹瀉、噁心、嘔吐、腹痛 Diarrhoea, nausea, vomiting, abdominal pain	日本、歐洲、挪威海岸 Japan, Europe, Norwegian coast
失憶性貝類中毒 Amnesic shellfish poisoning (ASP)	青口、蜆、蟹、鯷魚 Mussels, clams, crabs, anchovies	腹部痙攣、嘔吐、喪失方向感、部分病者會出現失憶 Abdominal cramps, vomiting, disorientation, memory loss in some cases	美國、加拿大、新西蘭、日本 United States, Canada, New Zealand, Japan

食物安全平台
Food Safety Platform

上圖：青口；
下圖：蜆
Above: Mussel;
Below: Clam

上圖：河豚；
下圖：吞拿魚
Above: Puffer fish;
Below: Tuna

鯖魚中毒／組胺中毒

人們吃下含組胺這種有毒物質的鯖科魚類(例如吞拿魚、馬鮫、沙甸魚及鯷魚)後，會出現鯖魚中毒。死去的鯖科魚類肌肉中的游離組胺酸在腐爛及貯存不善的過程中，因某些細菌存在而轉化成組胺。鯖魚中毒的臨牀症狀與藻類毒素引致的中毒症狀不同，主要是面部通紅、出疹及心悸。由二零零一至零六年，本港有25宗組胺中毒報告，受影響人數為46人。

烹煮會否降低風險？

雪卡毒素、貝類毒素、河豚毒素及組胺都非常耐熱，不能透過烹煮及加工過程消除。這些天然有毒物質不帶異常的味道或氣味，因此無法從外觀上識別出受污染的海產。

給消費者的建議

1. 珊瑚魚：每次只吃小量，避免吃卵子、肝、腸、頭及皮。吃這類魚時，避免喝酒精類飲品或吃果仁製品，因為已知道這些物質會加劇中毒症狀。

2. 貝類：在烹煮前先除去內臟及生殖器，每次只吃小量貝類，並避免吃下烹調汁液，因為部分貝類毒素可溶於水中。

3. 河豚：避免自行劏洗及烹煮河豚。

4. 鯖科魚類：把可能含有組胺的魚類(例如吞拿魚、馬鮫、沙甸魚及鯷魚)妥善冷藏在攝氏4度或以下。

Tetrodotoxin Poisoning

Tetrodotoxin is a potent neurotoxin found in fish of the family *Tetraodontidae*, and concentrated in the ovaries (eggs), liver, guts and the skin. Fish commonly associated with tetrodotoxin intoxication include puffer fish and porcupine fish although not all the species contain the toxin. Although the cause is unknown, tetrodotoxin is considered likely to be produced by marine bacteria that are often associated with marine animals. From 1997 to 2006, eight cases of tetrodotoxin poisoning affecting 15 people were reported in Hong Kong. Paraesthesia in the face and extremities, dizziness and numbness are the characteristic symptoms, and death may occur in severe cases.

Scombroid Poisoning/Histamine Poisoning

Scombroid poisoning occurs after the ingestion of scombroid fish species (e.g. tuna, mackerel, sardines, anchovy) containing the toxic substance histamine. Histamine is formed during spoilage and improper storage by conversion of the free amino acid histidine in muscles of dead fish with the presence of certain bacteria. The clinical symptoms are different from those of poisoning from the phycotoxins and are characterised by facial flushing, rashes, and palpitations. From 2001 to 2006, 25 cases of histamine poisoning affecting 46 people were reported in Hong Kong.

Does Cooking Reduce the Risk?

Ciguatoxin, shellfish toxins, tetrodotoxin and histamine are heat-stable and cannot be removed upon cooking and processing. These natural toxic substances are tasteless and odourless, and the contaminated seafood cannot be distinguished by their appearance.

Advice to Consumers

1. Coral reef fish: Eat only small amounts in any one meal, avoid consuming the roe, liver, guts, head and skin. Avoid consuming alcoholic beverages or nut products together with the fish. These substances are known to increase the severity of symptoms.

2. Shellfish: Remove the viscera and gonads before cooking, eat only small amounts of shellfish in any one meal, and avoid consuming the cooking liquid since some of the shellfish toxins are water soluble.

3. Puffer fish: Avoid dressing and cooking puffer fish on your own.

4. Scombroid fish: Properly refrigerate fish that may contain histamine such as tuna, mackerel, sardine and anchovy at 4°C or below

食物事故點滴
Food Incident Highlight

糭子中的蘇丹紅

食物安全中心(中心)近日測試了約80個糭子樣本，發現當中兩個含微量非准許染色料蘇丹紅四號，含量分別為百萬分之零點一二及零點零四六。中心認為，消費者在一般情況下進食問題食品應不會對健康造成不良影響。

二零零六年年底，本港因驗出部分鴨蛋及雞蛋樣本含非准許染色料蘇丹紅而引起市民廣泛關注食物中濫用該染色料的情況。同年十二月，中心推行蛋類進口自願登記計劃，內地當局其後開始為輸港蛋類及蛋製品簽發衞生證明書，以確保有關食品不含蘇丹紅。與此同時，中心透過食物監察計劃繼續監察食物中非法使用蘇丹紅的情況。

食物製造商應向可靠的供應商採購食物配料，並在使用食物添加劑時遵從有關法例規定。

Sudan Dye in Rice Dumplings

The Centre for Food Safety (CFS) recently tested some 80 samples of rice dumplings of which two samples were found to contain traces of non-permitted colouring matter, Sudan IV, at 0.12 and 0.046 parts per million, respectively. The CFS considered that normal consumption of the affected products was unlikely to have any adverse health effects on consumers.

The abuse of Sudan dyes in food raised territory-wide concerns in late 2006 as the non-permitted colouring matter was detected in some duck and hen egg samples. In December 2006, the CFS launched a voluntary enrolment scheme for egg importation. The Mainland authorities subsequently began to issue health certificates for eggs and egg products exporting to Hong Kong to ensure that they are free from Sudan dyes. Meanwhile, the CFS continued monitoring the illegal use of Sudan dyes in food under the Food Surveillance Programme.

Food manufacturers are advised to procure food ingredients from reliable suppliers and comply with legal requirements when using food additives.

糭子及其材料
Rice dumplings and their ingredients

硫酸銅與糭葉

去年，傳媒報道中國內地有人使用工業用硫酸銅令糭葉更加青綠，食物安全中心(中心)遂在本港進行糭葉測試，並無發現使用硫酸銅的情況。今年，中心亦對葉子樣本進行測試，結果顯示葉子沒有經過銅化合物處理。

過量攝取銅可令人出現腹瀉、嘔吐及黃疸病等症狀。硫酸銅可溶於水中，把食物放進水中烹煮可減少其含量。另一方面，銅是必需的元素，身體需要微量的銅才可正常運作。

業界應向可靠的供應商採購配料和材料，並在使用食物添加劑時遵從有關規例。

Copper Sulphate and Wrapping Leaves for Rice Dumplings

Last year, the media reported that industrial grade copper sulphate had been used to make the leaves for wrapping rice dumplings look greener in Mainland China. The Centre for Food Safety (CFS) subsequently conducted analysis of such leaves and found no evidence of such use in Hong Kong. Leaf samples were also tested this year and results indicated that they were not treated with the copper compound.

Excessive intake of copper can cause symptoms like diarrhoea, vomiting and jaundice. Copper sulphate is water soluble. Cooking in water could reduce its content. On the other hand, copper is an essential element and the body would need trace amount of this element to function normally.

The trade is advised to purchase ingredients and materials from reliable suppliers and observe relevant regulations when using food additives.