

Advisory Council on Food and Environmental Hygiene

Report on the Food Surveillance Programme for 2014

Purpose

This paper briefs members on the Food Surveillance Programme of the Centre for Food Safety (CFS) in 2014 and reports on the major surveillance results for the period and the follow-up actions taken.

Food Surveillance Programme

2. CFS adopts the World Health Organization's "from farm to table" strategy when working to ensure food safety in Hong Kong. Control at source includes allowing only food from registered farms / processing plants with audit inspections to enter Hong Kong, and requiring health certificates for certain food animals and food products, etc. At the downstream of the food supply chain, the food surveillance programme is a key component of our measures to ensure food safety.

3. CFS' Food Surveillance Programme monitors food on sale to ensure its compliance with legal requirements and fitness for human consumption. CFS takes food samples at the import, wholesale and retail levels and adopts a risk-based principle in determining the types of samples to be collected, the frequency and number of samples taken for testing, and the types of laboratory analysis to be conducted. The sampling programme is under regular review by CFS, taking into account factors such as past food surveillance results, local and overseas food incidents as well as relevant risk analysis. CFS consults the Expert Committee on Food Safety (the Expert Committee) on food surveillance projects under the Programme, which will be implemented only after they have been endorsed by the Expert Committee.

4. The three-pronged food surveillance strategy consists of regular food surveillance, targeted food surveillance and seasonal food surveillance. In addition, CFS also conducts surveys on popular food items to assess the

safety of food that is commonly consumed in Hong Kong. In 2014, CFS completed eight targeted food surveillance projects, six seasonal food surveillance projects and one survey on popular food items. Details are set out in the [Annex](#).

Announcement Mechanism

5. CFS releases a monthly Food Safety Report that summarises all surveillance results of the previous month. If test results indicate that a food sample poses immediate threats to public health or is related to issues of public concern, CFS will issue press releases immediately to explain the risks involved and advise the public against consuming the food concerned.

6. The results of targeted food surveillance projects and surveys on popular food items are released upon completion, while the results of seasonal food surveillance projects are announced ahead of the relevant festivals and seasons to enable consumers to make informed choices.

7. Apart from being announced through press releases, the food surveillance results are also uploaded onto CFS' website and Facebook page. Advice will be given to consumers on measures to minimise health risks posed by problem food.

Overall Results

8. Apart from radiation testing of samples of imported food from Japan¹, CFS conducted tests on a total of about 64 100 food samples in 2014, i.e. about nine samples per 1 000 persons of the population of Hong Kong. This is a relatively high testing rate when compared with other overseas economies.

9. There were 139 unsatisfactory samples among these test results (please see [Table 1](#)). The overall satisfaction rate was 99.8%. The results of a number of targeted food surveillance projects², surveillance on some seasonal food³ and survey on popular food items⁴ were all satisfactory.

¹ Please refer to item VI below for radiation testing of samples of imported food from Japan.

² Including projects on *Listeria monocytogenes*, *Vibrio parahaemolyticus*, *Salmonella* and *Staphylococcus aureus* in ready-to-eat food.

³ Including mooncakes, hairy crabs, lap-mei and poon choi.

⁴ Hotpot food and soup base.

Table 1: Major problems of unsatisfactory samples

Food group	Number of samples tested*	Number of unsatisfactory samples	Major problems (number of unsatisfactory samples involved)
Vegetables, fruits and related products	26 600	48	Pesticides(39), preservatives(5), colouring matters(1), metallic contaminants(1), pathogens(1), food labelling(1)
Meat, poultry and related products	7 000	13	Preservatives(12), food labelling(1)
Aquatic products and related products	6 700	28	Toxin(18), metallic contaminants(7), pathogens(3)
Milk, milk products and frozen confections	8 200	36	Hygiene indicators(18), composition(16), food labelling(2)
Cereals and cereal products	1 400	1	Preservatives(1)
Others	14 100	13	Pathogens(7), peroxide value (2), preservatives(1), polycyclic aromatic hydrocarbons(1), food labelling(1), food additives(1)
Total	64 100	139	

* Figures may not add up to the total due to rounding.

10. Most of the unsatisfactory samples did not involve serious problems and would not cause adverse health effects to the general public. Details of individual food items with more unsatisfactory samples are set out below.

1. Pesticide residues in vegetables and fruits

11. During the period from 1 August 2014 when the Pesticide Residues in Food Regulation (Cap. 132CM) came into operation to the end of 2014,

CFS completed pesticide residue tests for about 10 700 food samples collected at the import, wholesale and retail levels. Of these, 39 samples were found to be unsatisfactory while the remaining samples were all satisfactory. The overall unsatisfactory rate was less than 0.4%.

12. According to the findings of the risk assessment⁵ conducted by CFS on the unsatisfactory samples, normal consumption of all except two unsatisfactory samples was unlikely to pose immediate adverse health effects. The two exceptions were a green string pod sample that was found to contain Carbofuran at a level of 4.4 parts per million (ppm) and might cause adverse health effects under normal consumption, and a purslane sample that was found to contain Dimethoate at a level of 5.2 ppm and might cause adverse health effects if 230 grams of the purslane concerned was consumed within a short period of time.

13. CFS followed up on the samples concerned including announcement of the testing results to the public, source and distribution tracing of the vegetables concerned, as well as collection of further samples for testing to protect public health. When CFS announced the concerned results, it also recommended the public that pesticide residues in vegetables could be reduced by rinsing vegetables several times under running water, then soaking them in water for one hour, or blanching them in boiling water for one minute and having the water discarded. If the public wants to further reduce the intake of pesticide residues, they can also remove the outer leaves or peel of the vegetables.

II. Preservatives in fresh meats

14. CFS collected over 1 100 fresh meat samples for testing of preservatives in 2014. Surveillance results revealed that 12 samples were found containing sulphur dioxide, a preservative which is not permitted to be used in the food concerned. With normal consumption, the foods concerned would not pose any adverse health effects to consumers. Warning letters were immediately issued to the traders concerned and samples were taken to monitor their improvements.

⁵ The assessment methodology involves comparison between the data determined by the detected level of pesticide residues in a food sample in combination with the relevant consumption pattern of the food (i.e. the result of risk assessment) and the safety reference values (e.g. acceptable daily intakes (ADI) for long-term exposure assessment, or acute reference dose (ARfD) for short-term exposure assessment).

III. Paralytic shellfish poisoning toxin was detected in geoduck clams

15. Paralytic shellfish poisoning (PSP) toxin was detected in 16 Canadian geoduck clam samples collected at import level in December 2014. PSP toxin can cause symptoms such as numbness of mouth and limbs and gastrointestinal discomfort. In severe cases, paralysis with respiratory arrest and even death may occur.

16. In light of the aforesaid testing results, CFS requested the importer concerned to stop sale of the affected food and traced the distribution of the food immediately. CFS also informed the Canadian authorities of the test results and suspended the import of geoduck clams from the same harvest area immediately. CFS also informed the accident and emergency departments of local hospitals to take note of relevant symptoms. CFS did not receive any related PSP food poisoning notification during investigation.

IV. Excessive metallic contaminants in aquatic products

17. CFS collected over 1 500 aquatic food samples during regular food surveillance for testing of metallic contaminants in 2014. Seven samples were detected with metallic contamination exceeding the legal standards. These included three raw oyster samples detected to contain excessive cadmium, as well as three fish samples and a fried marlin fish fibre sample detected to contain excessive mercury. The testing results of the remaining samples were all satisfactory.

18. Occasional consumption of the aforesaid oysters with excessive cadmium will not cause adverse health effects to consumers. However, adverse impact on the kidneys and bones cannot be ruled out over long term consumption. The reported level of mercury in the fish and fried marlin fish fibre sample concerned is unlikely to pose adverse health effects for the general public upon normal consumption.

19. Fish contain many essential nutrients, such as omega-3 fatty acids and high-quality proteins. Fish also provide the nutrients required for brain development of foetus and young children. Therefore, the public should maintain a balanced and varied diet and consume moderate amount of a variety of fish. Nevertheless, as CFS has always advised, pregnant women, women planning pregnancy and young children should opt for fish that are smaller in size for consumption. They should avoid eating large-sized fish, predatory fish and other types of fish which may contain high levels of mercury (examples are tuna, alfonsino, shark, swordfish,

marlin, orange roughy and king mackerel), so as to minimise the health risk posed to the foetus, infants and young children by excessive exposure to metallic contaminants from food.

20. As metallic contaminants in food mainly come from the environment, it is more effective to control at source. As such, CFS traced the sources of the unsatisfactory samples and notified the authorities of the places of origin for follow-up. CFS also issued warning letters to the traders concerned, requiring them to stop selling and to dispose of the affected food.

V. Hygiene indicators for and composition of imported milk products and frozen confections

21. CFS has been taking samples of milk products and frozen confections at the import level for testing. In particular, milk products and frozen confections imported into Hong Kong for the first time have to be detained for testing and will only be allowed for sale in the market after passing the tests. During such operations in 2014, CFS found a total of 14 samples from two consignments of imported milk products and three consignments of imported frozen confections with hygiene indicators (total bacterial count or coliform organisms) exceeding the legal standards of Hong Kong. It indicated that the hygienic conditions of those samples were unsatisfactory, but did not imply that the samples would pose direct adverse health effects. All these consignments were disposed of without entering the local market.

22. Besides, during the same year, CFS found that a total of 16 samples from four consignments of imported milk products and frozen confections of which the composition did not comply with the legal standards of Hong Kong, including one frozen confection sample with fat and milk solids below the legal requirements, and 15 milk and milk product samples with milk fat below the legal requirements. However, consumption of the food concerned would not pose adverse health effects. All these consignments were disposed of without entering the local market.

23. CFS notified the authorities of the exporting countries for follow-up. The products in question have been suspended from import into Hong Kong until CFS is satisfied with the reports of the importers or manufacturers on remedial actions.

VI. Radiation testing on food imported from Japan

24. In response to the Fukushima nuclear power plant incident in Japan in 2011, the Director of Food and Environmental Hygiene issued an order under Section 78B of the Public Health and Municipal Services Ordinance (Cap. 132) to prohibit import of vegetables and fruits, milk, milk beverages and milk powder from the five most affected prefectures of Japan, namely Fukushima, Ibaraki, Tochigi, Chiba and Gunma. CFS also prohibits the import of all chilled or frozen game, meat and poultry, all poultry eggs and all live, chilled or frozen aquatic products from the five prefectures to Hong Kong, unless accompanied by a certificate issued by the competent authority of Japan certifying that the radiation levels do not exceed the Guideline Levels. CFS also conducts tests on radiation levels of every consignment of food products imported from Japan to ensure food safety.

25. More than 61 500 samples of food imported from Japan were tested in 2014. The test results of all samples were satisfactory. All surveillance results were uploaded onto CFS' website on every working day. Of these, eight samples (including seven tea leaf samples and one juice sample) were detected with low radioactivity levels not exceeding the guideline levels of the Codex, which would not pose any adverse health effects. Despite that, the importers voluntarily surrendered the related food consignments for disposal upon learning the test results. The food consignments concerned did not enter the local market.

VII. Others

26. CFS also strengthened surveillance in response to public concerns on other food incidents and reports, such as the supply of suspected expired and greened meat products by Shanghai Husi Food Company, the Taiwan "substandard lard" incident, the alleged use of formaldehyde and sulphur dioxide in production of several hot pot food (such as deep-fried pork skin, squid, fresh bamboo shoots, konjac, soya bean sticks and ear fungus), and metallic contamination in mushrooms. CFS took immediate risk management measures, including liaising with the relevant authorities and trade for more details and required information, conducting sales check to determine whether or not the affected products were sold in Hong Kong and, where necessary, taking relevant food samples from the local market for testing of relevant hazardous substances.

Conclusions

27. The Food Surveillance Programme implemented by CFS in 2014 revealed that the overall satisfaction rate of the food sold in Hong Kong remained at a high level, which was comparable to that of recent years. For individual food products with problems identified, CFS has taken prompt and effective risk management actions to safeguard public health.

Advice Sought

28. Members are invited to note and comment on the Food Surveillance Programme implemented by CFS in 2014.

Food and Health Bureau

Food and Environmental Hygiene Department

Centre for Food Safety

March 2015

Projects under the 2014 Food Surveillance Programme

(A) Regular Food Surveillance

It covered major food groups such as fruits and vegetables, meat, poultry, aquatic products, milk and cereals. CFS adopted a risk-based approach in taking samples for chemical and microbiological analyses.

(B) Targeted Food Surveillance

- (i) Sulphur dioxide in meat
- (ii) Metallic contaminants in food
- (iii) *Listeria monocytogenes* in ready-to-eat foods
- (iv) *Vibrio parahaemolyticus* in ready-to-eat foods
- (v) *Salmonella* in ready-to-eat foods
- (vi) *Staphylococcus aureus* in ready-to-eat foods
- (vii) *Bacillus cereus* in ready-to-eat foods
- (viii) *Clostridium perfringens* in ready-to-eat foods

(C) Seasonal Food Surveillance

- (i) Lunar New Year food
- (ii) Rice dumplings
- (iii) Mooncakes
- (iv) Hairy crabs
- (v) Lap mei
- (vi) Poon choi

(D) Survey on Popular Food Items

- (i) Hot pot food and soup base