2007 Food Safety Report No. 6

Centre for Food Safety
Food and Environmental Hygiene Department

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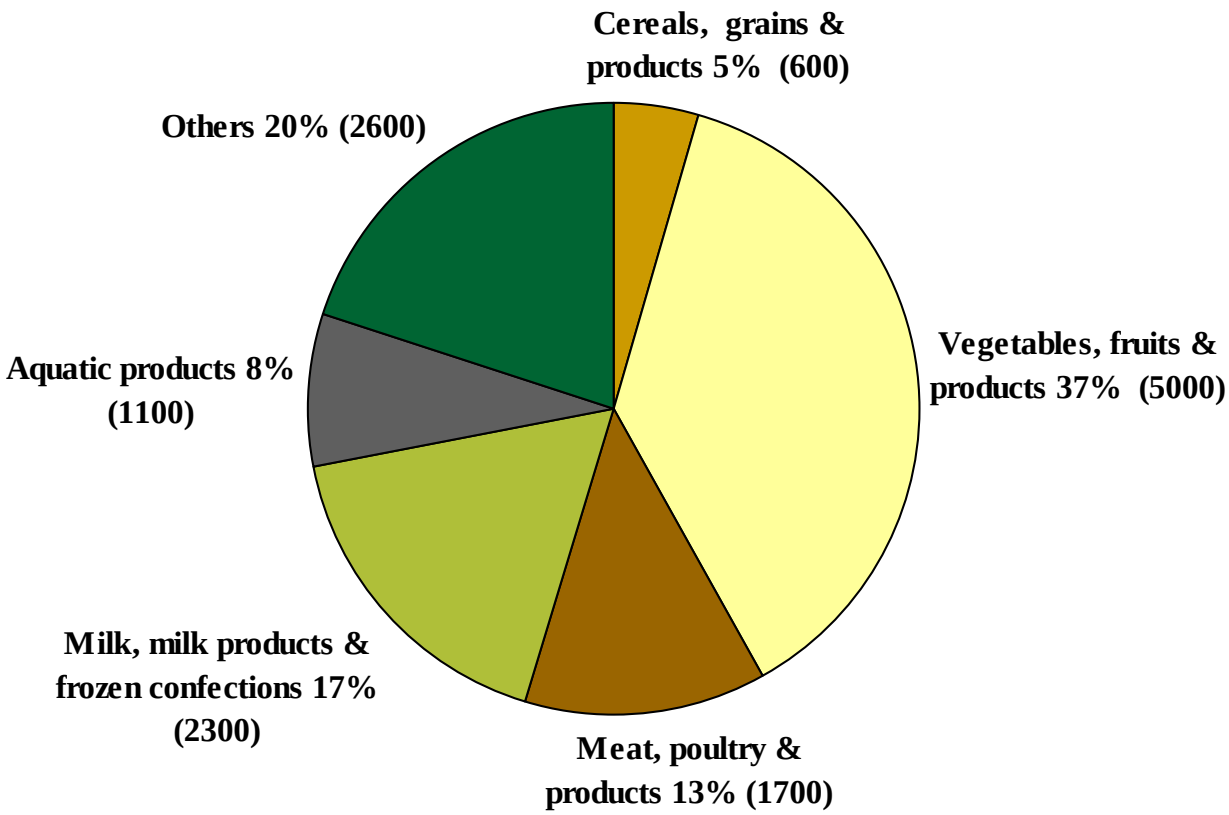
食物環境衞生署
Food and Environmental Hygiene Department
食物安全中心
Centre for Food Safety

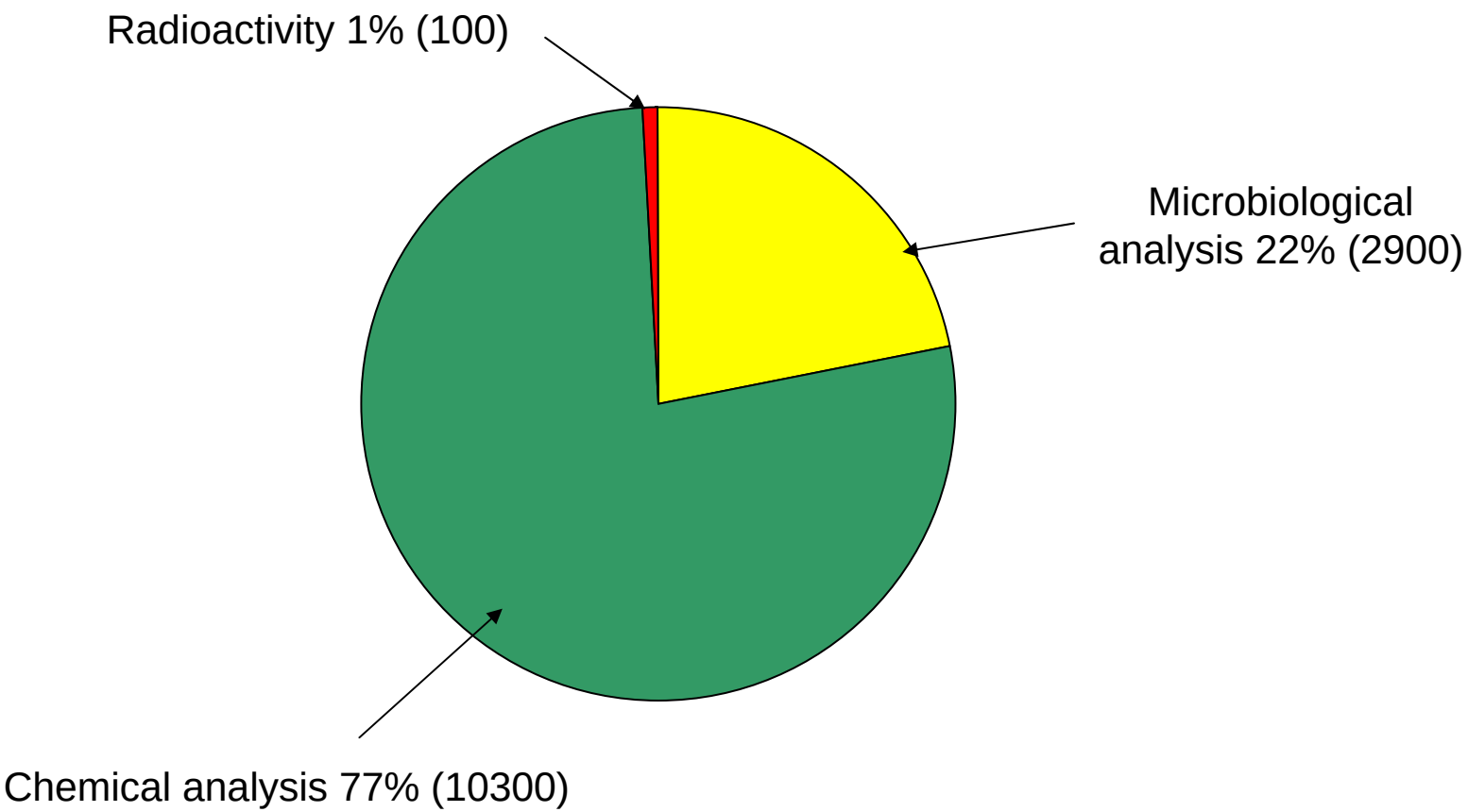
Types of food tested

- About 13300 food samples of various food groups were tested.



N.B.: Figures in brackets are rounded

Types of testing



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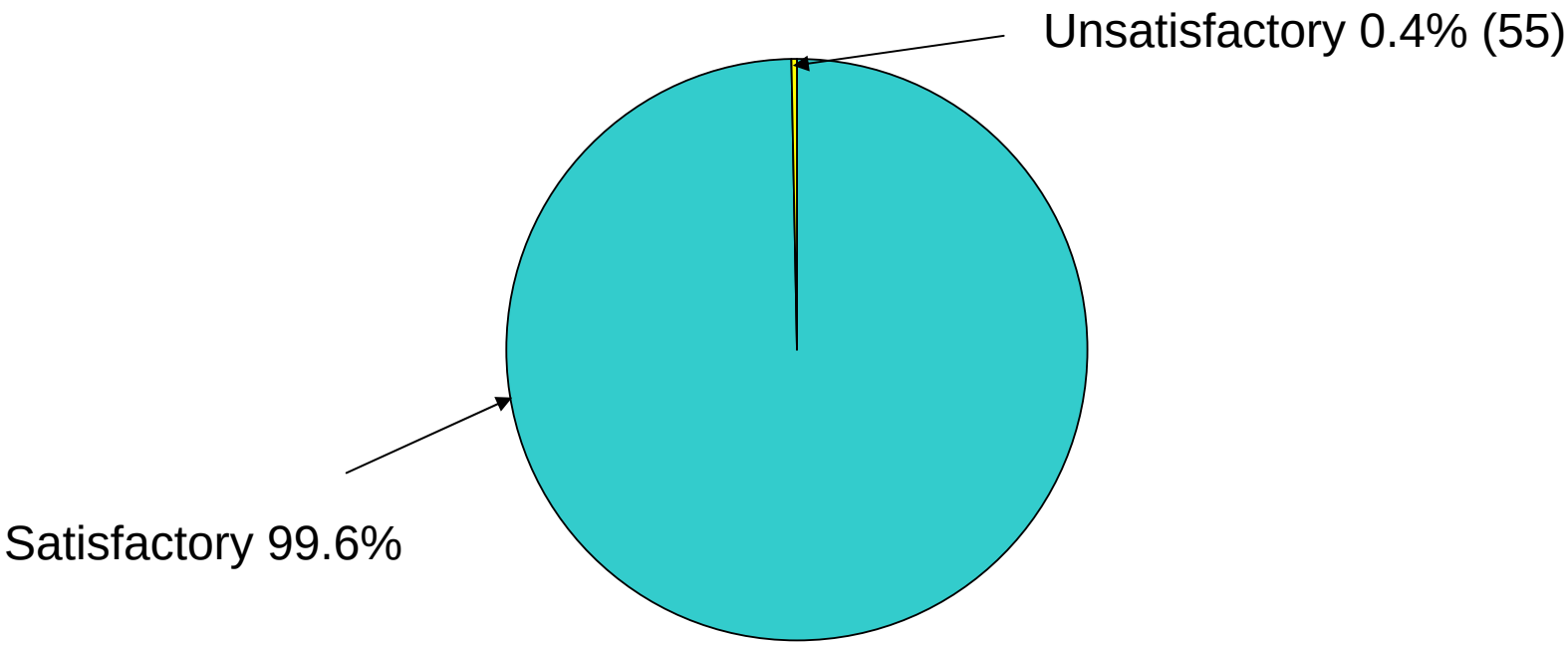
Overall results

- Overall satisfactory rate was 99.6%.
- Totally 55 unsatisfactory samples



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Unsatisfactory samples

- 55 unsatisfactory food samples included 12 previously announced results. The remaining 43 unsatisfactory samples are as follows:

Food Group	***No. of Samples Tested***	***No. of Unsatisfactory Samples***
Vegetables, fruits & products	5000	12
Meat, poultry & products	1700	21
Aquatic products	1100	3
Milk, milk products & frozen confections	2300	1
Cereal, grains and products	600	1
Others	2600	5
Total	***13300***	***43***

1. Vegetables, fruits & products

- About 5000 samples were collected. Overall satisfactory rate was 99.8%, with12 unsatisfactory samples in this report.
- Analysis included:
  - Microbiological tests
  - Chemical tests
    - > 100 types of 4 major groups of pesticides
      - organo-chlorine (e.g., DDT, HCH)
      - organo-phosphorous (e.g., methamidophos, isocarbophos)
      - N-methlycarbamates (e.g., carbofuran)
      - pyrethroids
    - Metallic contamination (included cadmium, arsenic and lead)
    - Preservatives (included sulphur dioxide, sorbic acid and benzoic acid)
    - Colouring matters
    - Sweeteners

1. Vegetables, fruits & products (Cont'd)

Pesticide residues

- 5 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 Chinese Flowering Cabbage	Methamidophos	1.3-1.4 ppm (1)
2 Chinese parsley & 1 Chinese onion	Isocarbophos	2-3.2 ppm (1)

(1) One sample of Chinese flowering cabbage is a follow-up sample.
The levels are low and should not pose significant health effect on consumers.

1. Vegetables, fruits & products (Cont'd)

Preservatives

- 4 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 preserved ginger	Sulphur dioxide Benzoic acid	210-560 ppm (1) 940 ppm (1)
1 preserved rakkyo	Benzoic acid	730 ppm (1)
1 preserved turnip	Sulphur dioxide	980 ppm (1)

(1) Except one preserved ginger, all others are follow-up samples of previous unsatisfactory samples.
Commonly used preservatives that are of low toxicity. The levels exceeded legal standards but should not pose significant health effect on consumers.

1. Vegetables, fruits & products (Cont'd)

Metallic contamination

- 3 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
Spinach, mixed vegetables & eggplant	Cadmium	0.15-0.21 ppm (1)

(1) The levels are low and should not pose significant health effect on consumers.

Colouring matters

- All samples tested for colouring matters were satisfactory.

2. Meat, poultry & products

- About 1700 samples were collected. Overall satisfactory rate was 98.3%, with 21 unsatisfactory samples in this report.

- Analysis included :
  - Microbiological tests
  - Chemical tests (e.g. preservatives, veterinary drug residues, colouring matters and other food additives)

2. Meat, poultry & products (Cont'd)

Veterinary drug residues

- Besides 3 previously announced canned pork product samples with nitrofurans and malachite green detected, there were 5 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 pig livers	Clenbuterol	0.017-0.03 ppm (1)
2 silk fowls	Enrofloxacin	0.17-0.21 ppm (2)
1 bovine liver	Streptomycin	1.4 ppm (2)

(1) Prohibited substance but the level is low. It is unlikely to pose significant health effect on consumers upon normal consumption.

(2) One sample of silk fowl is a follow-up sample. The detected level is low. It is unlikely to pose adverse health effect on consumers upon normal consumption.

2. Meat, poultry & products (Cont'd)

Preservatives

- Besides 6 previously announced unsatisfactory samples of meat with sulphur dioxide detected, there were 16 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
13 beef, 2 pork & 1 mutton	Sulphur dioxide	12-4300 ppm (1)

(1) One sample of beef is a follow-up sample.
A commonly used preservative but is not permitted in fresh meat (including chilled and frozen meat). It is of low toxicity and should not pose significant health effect on consumers.

2. Meat, poultry & products (Cont'd)

Pathogens

- All samples tested for pathogens were satisfactory.

Colouring matters

- All samples tested for colouring matters were satisfactory.

3. Aquatic products

- About 1100 samples were collected. Overall satisfactory rate was 99.5%, with 3 unsatisfactory samples in this report.

- Analysis included:
  - Microbiological tests
  - Chemical tests (e.g. veterinary drug residues, biotoxins, colouring matters, metallic contamination and preservatives)

3. Aquatic products (Cont'd)

Veterinary drug residues

- Except 1 previously announced bream fish fillet sample which contained trace amount of malachite green, all other samples tested for veterinary drug residues were satisfactory.

Metallic contamination

- Besides 1 previously announced unsatisfactory oyster meat sample which contained cadmium, there were 3 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 Alfonsino	Mercury	1.4 ppm (1)
1 scallop	Cadmium	3 ppm (2)

(1) One sample of Alfonsino is a follow-up sample. Occasional consumption would not cause adverse health effect, but consumption on a long-term basis could exceed safety level.

(2) The level is low and should not pose significant health effects on consumers.

3. Aquatic products (Cont'd)

Biotoxin

- All samples tested for biotoxin were satisfactory.

Preservatives

- All samples tested for preservatives were satisfactory.

Pathogens

- All samples tested for pathogens were satisfactory.

4. Milk, milk products & frozen confections

- About 2300 samples were tested including ice-cream, cheese, milk and milk products, etc.
- Except 1 unsatisfactory sample, all results were satisfactory.
- Analysis included:
  - Microbiological tests (total bacterial count, pathogens, e.g., *Salmonella* and *Listeria monocytogenes*)
  - Chemical tests (preservatives, colouring matters, sweeteners)

4. Milk, milk products & frozen confections (Cont'd)

Microbiological testing

- All samples were tested negative for pathogens.
- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Soft ice-cream	Coliform organisms	1900/ g [1]

[1] Coliform organisms and total bacterial counts are hygiene indicators.

5. Cereal, grains and products

- About 600 samples including bread, crackers, rice and noodles, etc.
- Overall satisfactory rate was 99.8%. There is one unsatisfactory sample to be announced.
- Analysis included microbiological and chemical tests such as:
  - sweeteners
  - colouring matters
  - pesticide residues
  - preservatives

5. Cereal, grains and products

Preservatives

- 1 unsatisfactory sample :

Sample	Unsatisfactory testing item	Result
Bread	Sorbic acid	1400 ppm (1)

(1) A commonly used preservative of low toxicity. It should not pose significant health effect on consumers.

Metallic contamination and colouring matters

- All samples tested for metallic contamination and colouring matters were satisfactory.

6. Other food commodities

- About 2600 samples were collected. Overall satisfactory rate was 99.8%, with 5 unsatisfactory samples in this report.
- Types of food included:
  - Mixed dishes
    - Pathogens, colouring matters and preservatives
  - Dim Sum
    - Pathogens, preservatives, colouring matters and sweeteners
  - Beverages
    - Pathogens, colouring matters, sweeteners and preservatives
  - Sushi and sashimi
    - Microbiological examination

6. Other food commodities (Cont'd)

- Sugar and sweets
  - Pathogens, sweeteners, colouring matters and preservatives
- Condiments and sauces
  - Colouring matters and preservatives
- Snacks
  - Sweeteners, colouring matters and preservatives
- Egg and egg products
  - Pathogens and colouring matters
- Others

6. Other food commodities (Cont'd)

Chemical analysis

- Besides 1 previously announced chili sauce sample that contained rhodamine B, there were 5 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 grape flavoured soft drink	Benzoic acid	290 ppm (1)
3 seasoning sauce	Sulphur dioxide (preservative) Sorbic acid (preservative)	86-700 ppm (1) 560 ppm (1)
1 seasoning sauce	B.H.T. (anti-oxidant) B.H.A. (anti-oxidant)	2100 ppm (2) 1200 ppm (2)

(1) Commonly used preservatives of low toxicity that should not pose significant health effects on consumers

(2) The levels are low and should not pose significant health effects on consumers.

Microbiological analysis

- All samples for microbiological analysis were satisfactory.

Follow-up actions

- Trace source of food items in question.
- Request vendors to stop sale and dispose of incriminated food items.
- Take follow-up samples.
- Issue warning letters to concerned vendors.
- Take prosecution actions if there is sufficient evidence.

Annual Summary of 2007 Food Surveillance Programme

2007 Food Surveillance Programme

- There were totally about 65000 samples. Apart from the routine food surveillance which covered various food types such as vegetables and fruits, meat, aquatic products, milk and cereals, the CFS has since 2007 started to conduct various targeted and seasonal food surveillance projects. They include:

Targeted food surveillance

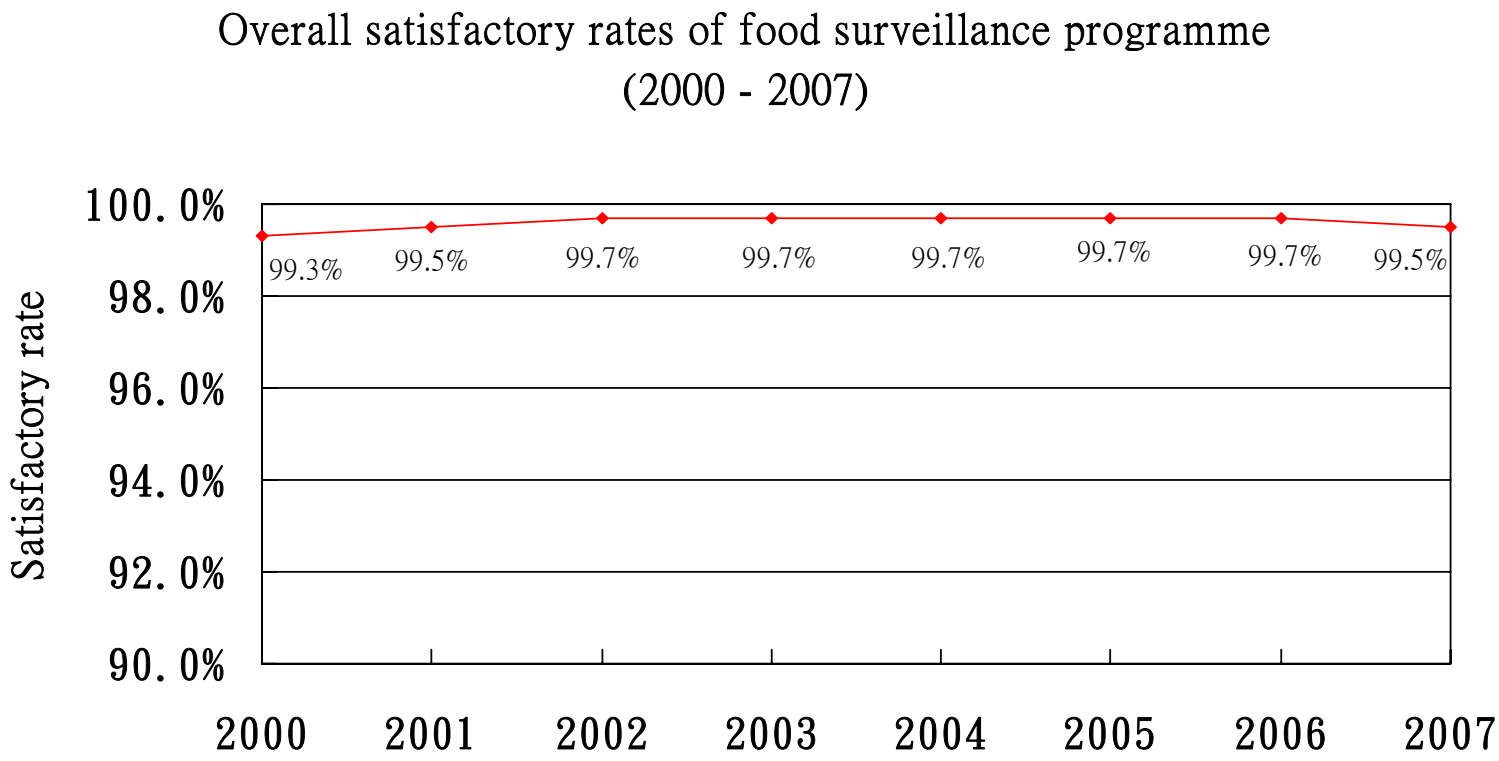
- Formaldehyde in Noodlefish
- Nitrate and Nitrite in Meat and Meat Products
- Microbiological Quality of Lunch Boxes
- Microbiological Quality of Ice-cream
- Colouring Matters in Soup Mix and Spicy Snacks
- Preservatives in preserved fruits and vegetables
- Sulphur Dioxide in Meat
- Non-bottled Drinks and Chinese Herb Tea
- Malachite green in aquatic products
- Potassium Bromate in Flour-made Products
- Aflatoxins in Nuts & Cereal Products
- Colouring Matters in Chili and Curry Seasonings

Seasonal food surveillance

- Chinese New Year Food
- Rice Dumplings
- Mooncakes
- Hairy Crabs
- Buffet Food and Poon Choi

Overall satisfactory rate

- The overall satisfactory rate was 99.5%. It was comparable to that of 2006 (99.7%).



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Results of different types of food

- Totally 326 unsatisfactory samples

Food group	No. of samples*	Unsatisfactory samples	Satisfactory rate
Vegetables, fruits & products	26000	107	99.6%
Meat, poultry & products	7000	66	99.1%
Aquatic products	4000	66	98.5%
Milk, milk products & frozen confections	12000	46	99.6%
Others	16000	41	99.7%
Total	65000	326	99.5%

* N.B.: Figures are rounded.

Vegetables, fruits and products

- About 26000 samples were collected. 107 samples were unsatisfactory. The overall satisfactory rate was 99.6%.
- The unsatisfactory samples mainly involved preserved vegetables and fruits which were found to contain excessive preservatives or non-permitted preservatives.
- Trace amount of metallic contamination that exceeded the legal standard was detected in some vegetable samples.
- Pesticide residues were detected in some vegetable samples but the proportion and levels were low.
- Colouring matter not permitted for use in fresh vegetables was detected in some green peas samples. For orange and sweet potato which are of public concern, no added colouring matters were detected in all samples.

Meat, poultry & products

- About 7000 samples collected with 66 samples unsatisfactory, overall satisfactory rate being 99.1%
- Non-permitted or excessive preservatives in food was the major finding among the unsatisfactory samples. For example, sulphur dioxide, which was not permitted in fresh meat, was detected in some meat samples.
- Some pork and pig liver samples were found to contain low levels of clenbuterol. No food poisoning case was reported to be related to these samples.

Aquatic products

- About 4000 samples were collected. 66 samples were unsatisfactory. The overall satisfactory rate was 98.5%.
- The unsatisfactory samples mainly involved veterinary drug residues. For example, malachite green and nitrofurans were detected in freshwater fish. Test results of shrimps were satisfactory.
- With regard to reports on suspected fake noodlefish, the CFS conducted a targeted food surveillance on noodlefish in early 2007. Although no fake noodlefish was found, formaldehyde, a non-permitted preservative, was detected in some of the samples.
- High levels of shellfish toxin was detected in some scallop samples in early 2007. High levels of toxin was not detected in subsequent samples.
- The CFS found high level of histamine in individual samples of salted fish. The public was advised not to consume the affected product.
- Large predatory fish such as swordfish, tuna and Alfonsino is regarded as high-risk food for containing heavy metals. The CFS's food surveillance programme also identified some fish containing mercury at levels exceeding legal limit.

Milk, milk products & frozen confections

- About 12000 samples were collected. 46 samples were unsatisfactory. The overall satisfactory rate was 99.6%.

- The unsatisfactory samples included ice-cream and milk samples. The problems mainly involved hygiene indicators, with coliform organisms or total bacterial counts exceeding legal standards. All samples tested for pathogens were satisfactory.

Others

- About 16000 samples were collected. 41 samples were unsatisfactory. The overall satisfactory rate was 99.5%.
- The overall exceedances or breaches were not serious. Unsatisfactory samples mainly include the following:
  - Dim sum：
    - Some unsatisfactory samples were found to contain excessive or non-permitted preservatives. Other unsatisfactory samples involved colouring matters or pathogens.
  - Mixed dishes：
    - All unsatisfactory samples were found to contain pathogens such as bacillus cereus, salmonella and staphylococcus aureus. These pathogens may cause gastrointestinal upset.
  - Condiments and sauce：
    - Some unsatisfactory samples were found to contain preservatives or colouring matters which were excessive in levels or not permitted by law.

Advice for trade

- One of the main findings in 2007 was the detection of preservatives at levels exceeding legal limits or the detection of non-permitted preservatives in preserved vegetables and fruits, meat products and fresh meat. Some samples of snack and seasonings were found to contain non-permitted food additives such as non-permitted colouring matters. In manufacturing food products, the trade should follow “good manufacturing practice”(GMP), comply with legal requirements and properly keep fresh meat.

- As some samples of shellfish were found to contain high levels of shellfish toxin, the trade should purchase food from reliable supplier and maintain a good record system to facilitate source tracing if necessary.

- Besides, some ready-to-eat food samples were found to contain pathogens. The trade should adhere to good hygiene practices in processing food, especially to observe time and temperature (4℃ or below; 60℃ or above) controls, and separate raw food from ready-to-eat food.

- The trade should always take note of the information issued by CFS through its webpage, Food Alert, publications, letters and Trade Consultation Forum for the latest development on food safety.

Advice for consumers

- With regard to some food samples containing excessive/non-permitted food additives or veterinary drug residues, most of the levels concerned were low. Consumers need not be too worried about the related health effect. However, they should still maintain balanced diet.

- In respect of shellfish toxins, although high levels of toxin was not detected in samples subsequent to those announced in early 2007, shellfish is still a high-risk food for paralytic shellfish poisoning. To reduce the risk of poisoning, consumers should remove the viscera and gonads of shellfish before cooking and eating, consume small amount of shellfish at any one meal, and avoid consuming the cooking liquid.

- Since some fish samples were found containing excessive mercury, consumers should maintain a balanced diet. High-risk groups such as children, pregnant women and women planning for pregnancy should avoid eating large predatory fish.

- Although pesticide residues were found in some vegetable samples, both the proportion and levels were low. Consumers should wash vegetables and fruits thoroughly to further reduce the risk.

- Since pathogens were found in some mixed dishes such as fried rice, spaghetti and Poon Choi, consumers should patronize licensed restaurants and pay attention to the hygiene condition. As for take-away foods, people should consume them as soon as possible.

Food surveillance programme in 2008

- The CFS will maintain the three-tier food surveillance approach i.e. routine food surveillance, targeted food surveillance and seasonal food surveillance in 2008, and collect samples at import, wholesale and retail levels for chemical and microbiological testing.

- In planning the food surveillance programme, the CFS takes into consideration various factors including the consumption level, the risk of food items, past surveillance data and local and overseas food incidents. In addition to focusing on those unsatisfactory conditions in 2007 such as the use of sulphur dioxide in meat and excessive preservatives in preserved vegetables and fruits, the food surveillance programme of 2008 will continue to include various seasonal and targeted food surveillance projects such as those on Lunar New Year food, moon cakes and pesticide residues in aquatic products. In addition, the CFS will conduct targeted surveillance focusing on issues of concern such as contaminants in shellfish and the safety of some commonly-consumed food items e.g. dim sum, popular snacks and breakfast items.

- In accordance with the new amendment and development of regulations such as Preservatives in Food Regulations, the CFS will implement corresponding food surveillance.

- In order to allow the public to obtain the latest information on food safety, the CFS will continue to issue results of food surveillance via various channels on a timely basis. The CFS will also closely monitor the latest international development on food safety and adjust the food surveillance programme accordingly.