2008 Food Safety Report No. 2

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

Introduction

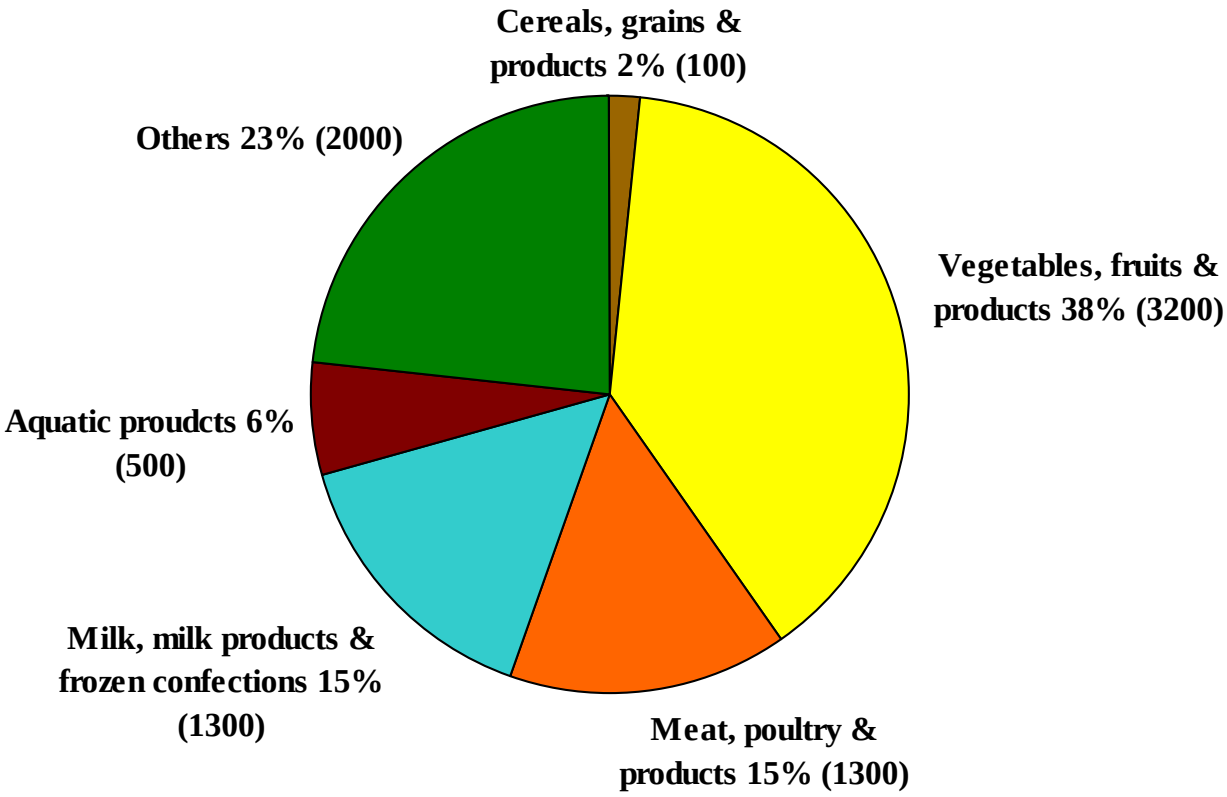
- The Centre for Food Safety (CFS) maintains the three-tier food surveillance approach i.e. routine food surveillance, targeted food surveillance and seasonal food surveillance in 2008, and collect samples at import, wholesale and retail levels for chemical and microbiological testing.

- Besides the routine food surveillance, CFS has just completed a seasonal food surveillance project on “rice dumpling” as the Tuen Ng Festival is approaching. In addition, CFS conducted a survey on popular food items on “Chinese breakfast” recently. CFS provides timely information about the safety of these 2 kinds of food to the public.

- This presentation gives an account of the food surveillance sample analyses that were completed in March and April 2008.

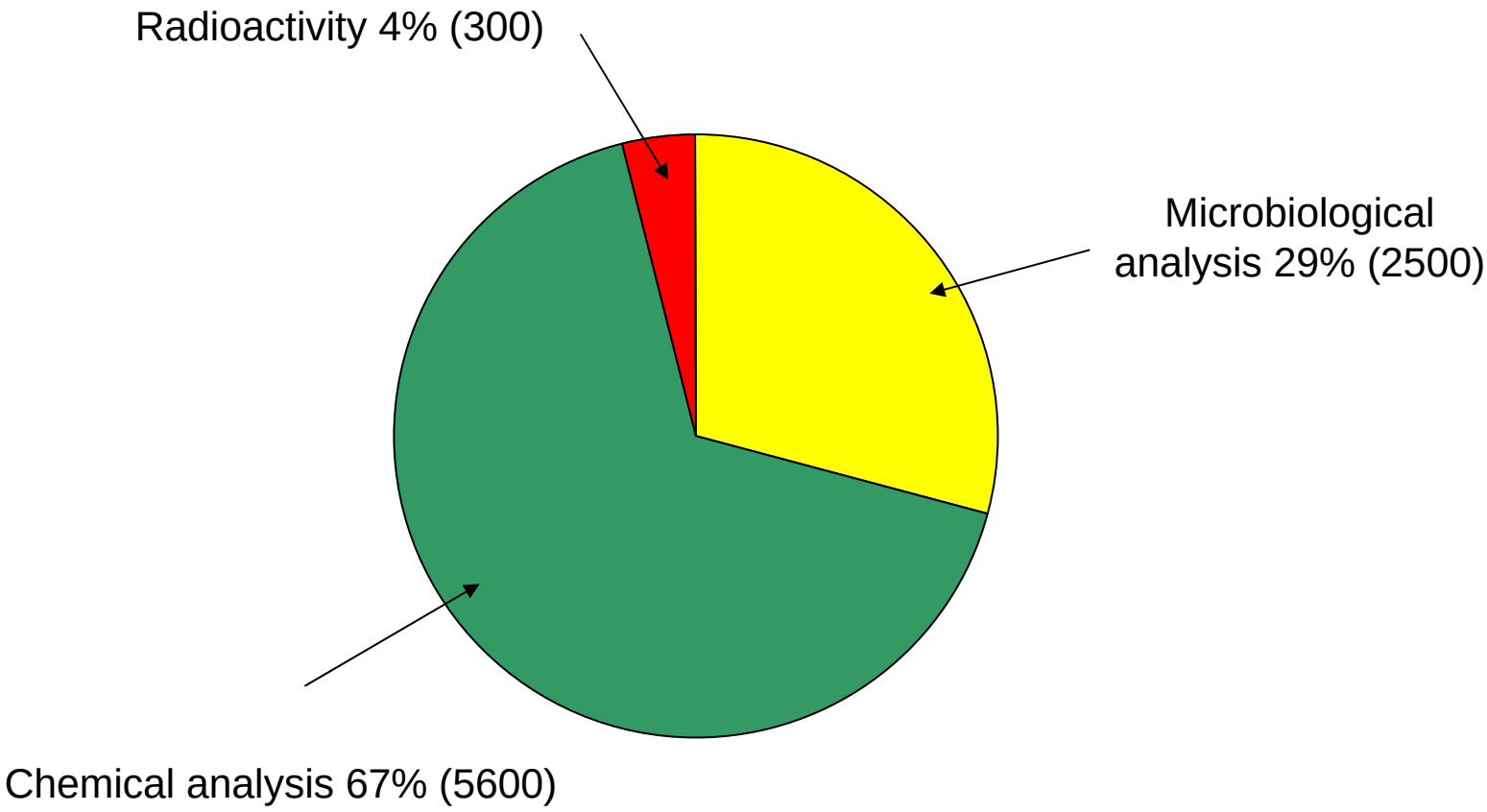
Types of food tested

- About 8400 food samples of various food groups were tested.



N.B.: Figures in brackets are rounded

Types of testing



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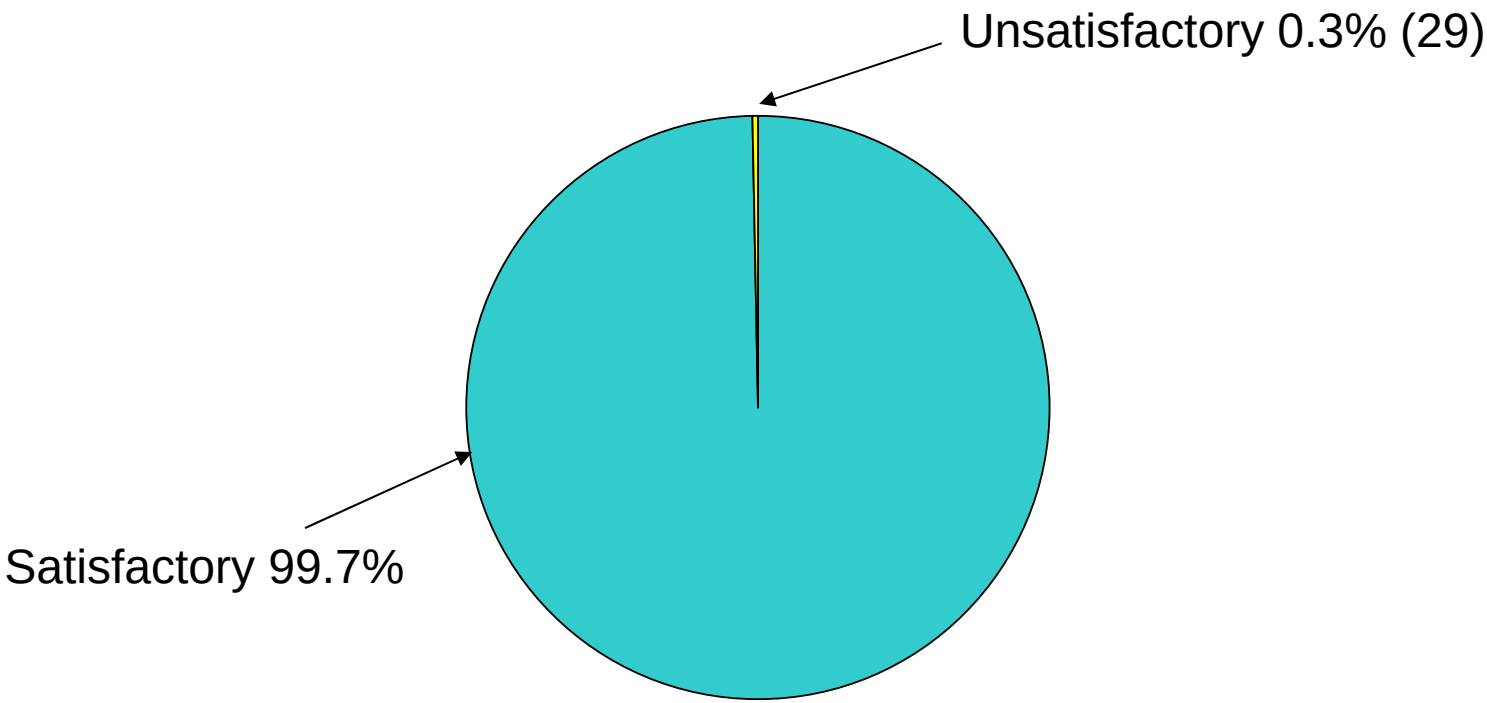
Overall results

- Overall satisfactory rate was 99.7%.
- Total 29 unsatisfactory samples.



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Unsatisfactory samples

- 29 unsatisfactory food samples included 2 previously announced results. The remaining 27 unsatisfactory samples are as follows:

Food Group	***No. of Samples Tested***	***No. of Unsatisfactory Samples***
Vegetables, fruits & products	3200	3
Meat, poultry & products	1300	6
Aquatic products	500	4
Milk, milk products & frozen confections	1300	3
Cereal, grains and products	100	6
Others	2000	5
Total	***8400***	***27***

1. Vegetables, fruits & products

- About 3200 samples were collected. Overall satisfactory rate was 99.9%, with 3 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)

Microbiological tests

- All samples for microbiological tests were satisfactory.

Metallic contamination

- All samples tested for metallic contamination were satisfactory.

Colouring matters

- All samples tested for colouring matters were satisfactory.

Sweeteners

- All samples tested for sweeteners were satisfactory.

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

Pesticide residues

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Green pepper	Methamidophos	2 ppm (1)

(1) The level is low and should not pose significant health effect on consumers. Thorough washing and cooking will remove most methamidophos.

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

Preservatives

- 2 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 preserved turnip	Sulphur dioxide	1300 ppm (1)
1 dried radish	Benzoic acid	1200 ppm (1)

Both were follow-up samples of 2 previous unsatisfactory samples.

(1) Commonly used preservatives that are of low toxicity. The levels exceeded legal standards but should not pose significant health effect on consumers.

2. Meat, poultry & products

- About 1300 samples were collected. Overall satisfactory rate was 99.4%, with 6 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)

Pathogens

- All samples tested for pathogens were satisfactory.

Colouring matters

- All samples tested for colouring matters were satisfactory.

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

Veterinary drug residues

- Besides 1 previously announced unsatisfactory sample of pork products found to contain trace amount of clenbuterol, there were 3 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 pork	Clenbuterol	0.002-0.0034 ppm (1)
1 shred pork	Clenbuterol	0.002 ppm (1)

(1) Prohibited substance but based on the detected levels, it is unlikely to pose adverse effect on consumers upon normal consumption.

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

Preservatives

- 3 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 pork	Sulphur dioxide	33 - 67 ppm (1)
1 beef	Sulphur dioxide	780 ppm (1)

(1) 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.

3. Aquatic products

- About 500 samples were collected. Overall satisfactory rate was 99.0%, with 4 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)

Metallic contamination

- All samples tested for metallic contamination were satisfactory.

Preservatives

- All samples tested for preservatives were satisfactory.

Biotoxins

- All samples tested for biotoxins were satisfactory.

3. Aquatic products (Cont'd)

Veterinary drug residues

- Besides 1 previously announced turbot fish sample found to contain trace amount of nitrofurans, there was 1 other unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Turbot fish	AMOZ (nitrofurans metabolite)	0.021 ppm (1)

(1) So far, evidence of adverse effect on food safety is limited.

Microorganisms

- 3 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
3 raw oysters	Norovirus nucleic acid	Detected (2)

(2) Norovirus may cause vomiting, diarrhoea, abdominal pain and fever.

4. Milk, milk products & frozen confections

- About 1300 samples were tested including ice-cream, cheese, milk and milk products, etc.
- Overall satisfactory rate was 99.8%, with 3 unsatisfactory samples in this report.
- 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)

- All samples were satisfactory for pathogens.

- 3 samples of the same consignment were unsatisfactory:

Sample	Unsatisfactory testing item	Result
1 consignment (3 samples) of bottled milk	Coliform organisms	Present in 0.1 ml [(1)]

[(1)] Coliform organisms is hygienic indicator.

5. Cereal, grains and products

- About 100 samples including bread, crackers, rice and noodles, etc.
- Overall satisfactory rate was 95.9%. There were 6 unsatisfactory samples to be announced in this report.
- Analysis included microbiological and chemical tests such as:
  - metallic contamination
  - colouring matters
  - pesticide residues
  - preservatives

5. Cereal, grains and products

Metallic contamination

- All samples tested for metallic contamination were satisfactory.

5. Cereal, grains and products

Preservatives

- 6 unsatisfactory samples :

Sample	Unsatisfactory testing item	Result
6 instant noodles		
▫ 3 noodles	TBHQ	85 - 130 ppm (1)
▫ 6 seasoning oil	TBHQ	110 - 200 ppm (1)
▫ 2 chili sauce	Benzoic acid	520 - 540 ppm (2)

(1) An anti-oxidant which is not permitted to be used in food in HK. However, according to the Codex General Standards on Food Additives, the permitted level to be used in such food is 200 ppm. The detected level was low and should not pose significant health effect on consumers.

(2) A commonly used preservative but the detected level exceeded the legal limit. It is of low toxicity and should not pose significant health effect on consumers.

6. Other food commodities

- About 2000 samples were collected. Overall satisfactory rate was 99.7%, with 5 unsatisfactory samples in this report.
- Types of food included:

Mixed dishes ❑ Pathogens, colouring matters & preservatives	Condiments and sauces ❑ Colouring matters, preservatives & sweeteners
Dim Sum ❑ Pathogens, preservatives, colouring matters & sweeteners	Snacks ❑ sweeteners, colouring matters & preservatives
Beverages ❑ Pathogens, colouring matters, sweeteners & preservatives	Eggs and egg products ❑ Pathogens & colouring matters
Sushi and sashimi ❑ Microbiological examination, metallic contamination & preservatives	Others
Sugar and sweets ❑ Pathogens, sweeteners, colouring matters & preservatives	

6. Other food commodities (Cont'd)

Chemical analysis

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
1 prickly ash	Rhodamine B & Crocein scarlet 3B (colouring matter)	Detected (1)

(1) Not permitted colouring matter in food.

6. Other food commodities (Cont'd)

Microbiological analysis

- 4 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 spicy chicken pot	*Salmonella* (pathogen)	Detected in 25 g (1)
1 vermicelli with sliced chicken	*Bacillus cereus* (pathogen)	3.4×10^5 / g (2)
1 rice with pork and lotus root in fermented tofu paste	*Bacillus cereus* (pathogen)	1.7×10^5 / g (2)
1 rice with spice ginger chicken wings	*Bacillus cereus* (pathogen)	1.4×10^5 / g (2)

(1) & (2) *Salmonella* and *bacillus cereus* may cause gastrointestinal upset such as vomiting, abdominal pain and diarrhoea.

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.

Summary

- For those samples detected with pathogens, they indicated that the food processing was unhygienic. The trade should avoid preparing food too far in advance. Keep food at safe temperatures (4°C or below; 60 °C or above). All food should be cooked thoroughly. For those required reheating, they should be thoroughly heated until the centre temperature reaches 75 °C or above.

- The bottled milk samples containing coliform organisms reflected unsatisfactory sanitary condition. Food manufacturer should ensure proper pasteurization of milk, maintain hygienic practice along the production line and keep good environmental hygiene.

- The other unsatisfactory samples were mainly related to the use of excessive/non-permitted food additives, veterinary drug residues and pesticide residues. The trade should use only permitted food additives, follow good manufacturing practice and comply with legal requirements. Public are advised to maintain a balanced diet to minimize risk.