2008 Food Safety Report No. 3

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

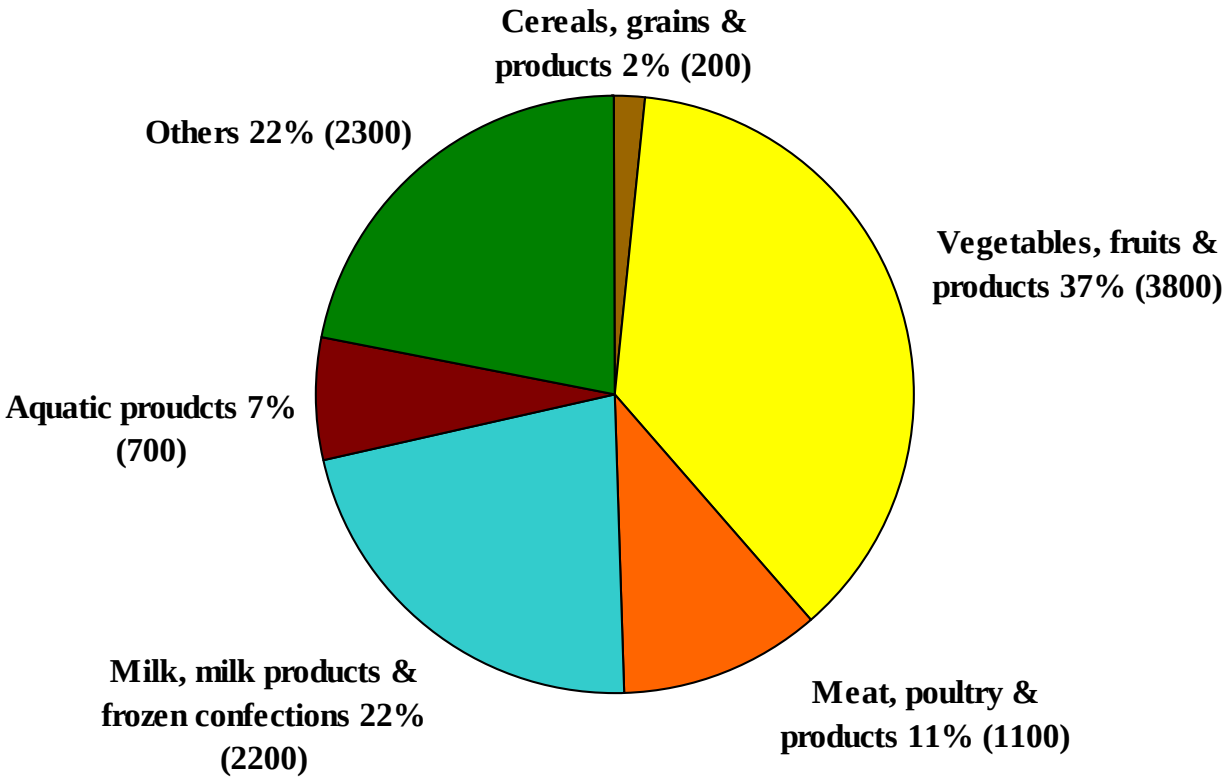
Introduction

- 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.

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

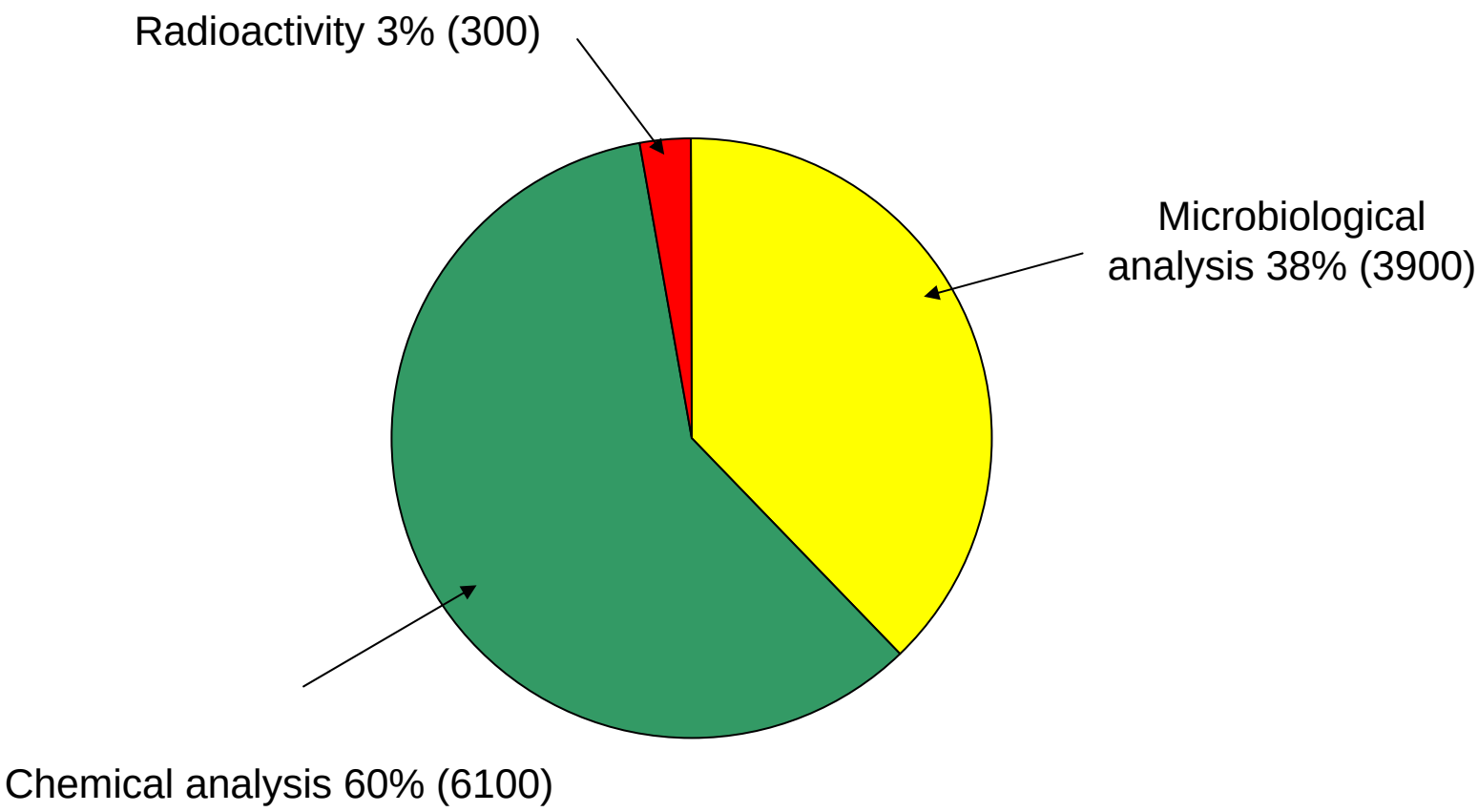
Types of food tested

- About 10200 food samples of various food groups were tested.



N.B.: Figures in brackets are rounded

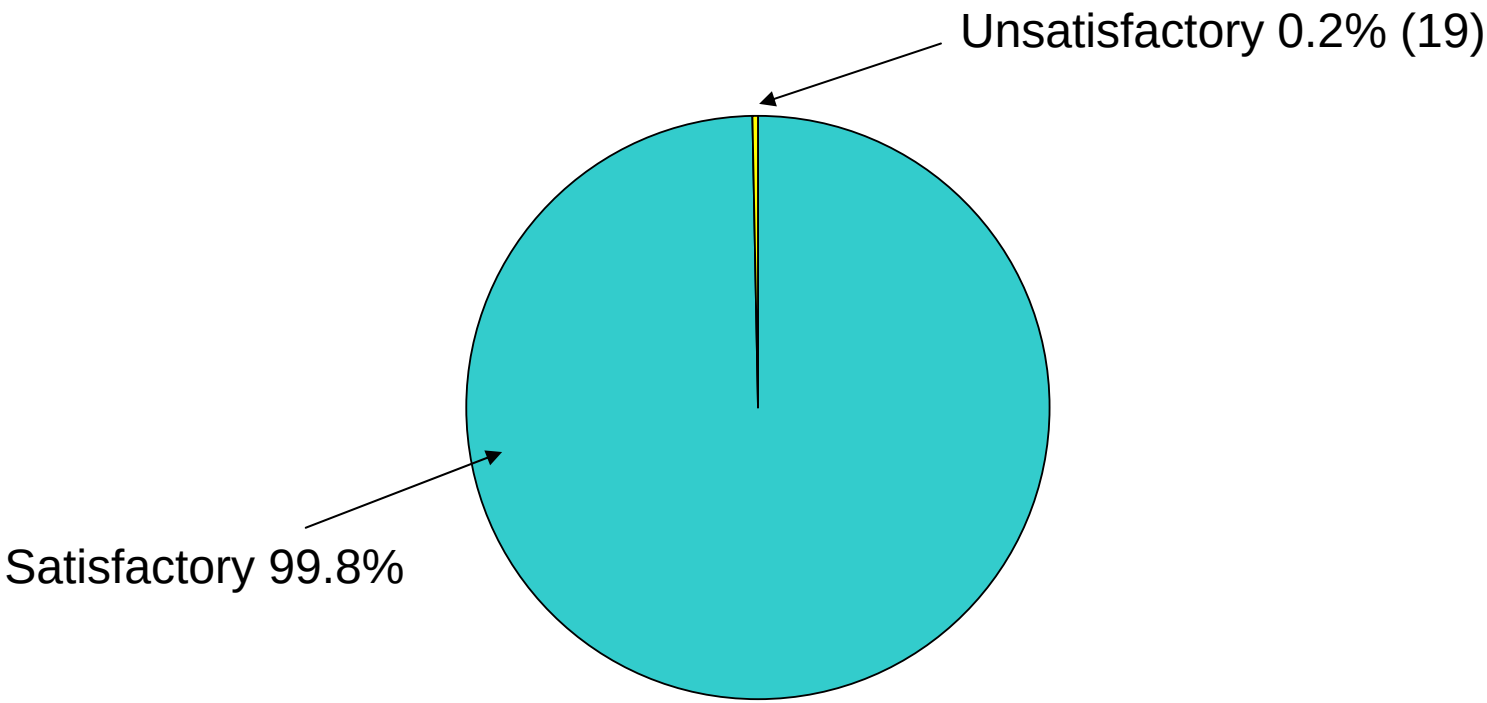
Types of testing



N.B.: Figures in brackets are rounded

Overall results

- Overall satisfactory rate was 99.8%.
- Total 19 unsatisfactory samples.



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Unsatisfactory samples

- 19 unsatisfactory food samples included 1 previously announced result. The remaining 18 unsatisfactory samples are as follows:

Food Group	*No. of Samples Tested*	*No. of Unsatisfactory Samples*
Vegetables, fruits & products	3800	3
Meat, poultry & products	1100	5
Aquatic products	700	0
Milk, milk products & frozen confections	2200	1
Cereal, grains and products	200	3
Others	2300	6
Total	***10200***	***18***

N.B.: Figures may not add up to total due to rounding.

1. Vegetables, fruits & products

- About 3800 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

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

Microbiological tests

- All samples for microbiological tests were satisfactory.

Preservatives and colouring matters

- All samples tested for preservatives and colouring matters were satisfactory.

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

Metallic contamination

- 2 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
Chinese parsley and spinach	Cadmium	0.23-0.41 ppm (1)

(1) The levels exceeded legal limit but upon normal consumption, it is unlikely to pose adverse effect on consumers. Thorough washing and soaking of vegetables will remove some cadmium attached on their surfaces.

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

Pesticide residues

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Assorted leafy vegetables salad	Methamidophos	2 ppm (1)

(1) The level is low and should not pose significant health effect on consumers.

2. Meat, poultry & products

- About 1100 samples were collected. Overall satisfactory rate was 99.5%, with 5 unsatisfactory samples in this report.

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

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)

Preservatives

- 4 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
Fresh bovine liver	Sulphur dioxide	120 ppm (1)
Barbecued pork	Sulphur dioxide	18 ppm (1)
Salami sausage slice	Sorbic acid	140 ppm (2)
Thai Style Jar Yok	Sorbic acid	130 ppm (2)

(1) A commonly used preservative but is not permitted in meat. It is of low toxicity and should not pose significant health effect on consumers.
(2) The levels exceeded legal limit. It is of low toxicity and should not pose significant health effect on consumers.

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

Veterinary drug residues

- There was 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Suckling pig	Chlortetracycline	0.13 ppm (1)
	Sulphonamides	0.27 ppm (2)

(1, 2) The levels exceeded legal limits but upon normal consumption, it is unlikely to pose adverse effect on consumers.

3. Aquatic products

- About 700 samples were collected. Analysis included:
  - Microbiological tests
  - Chemical tests (e.g. veterinary drug residues, biotoxins, colouring matters, metallic contamination and preservatives)

- All results were satisfactory.

4. Milk, milk products & frozen confections

- About 2200 samples were tested including ice-cream, cheese, milk and milk products, etc.
- Overall satisfactory rate was 99.96%, with 1 unsatisfactory sample in this report.
- Analysis included:
  - Microbiological tests (total bacterial count, pathogens, e.g., *Salmonella* and *Staphylococcus aureus*)
  - Chemical tests (preservatives, colouring matters, sweeteners)

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

- All samples were satisfactory for pathogens.

- 1 unsatisfactory sample :

Sample	Unsatisfactory testing item	Result
Soft ice-cream	Coliform organisms	570/ g (1)

(1) Coliform organisms is hygienic indicator. The detected level exceeded legal limit.

5. Cereal, grains and products

- About 200 samples including rice, noodles and breakfast cereal, etc.
- Overall satisfactory rate was 98.3%. There were 3 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.

Colouring matters

- All samples tested for colouring matters were satisfactory.

Pesticide residues

- All samples tested for pesticide residues were satisfactory.

5. Cereal, grains and products

Preservatives

- 2 unsatisfactory samples :

Sample	Unsatisfactory testing item	Result
2 instant noodles ▫ 1 seasoning oil ▫ 1 chili sauce	 TBHQ Sulphur dioxide	 220 ppm (1) 9.4 ppm (2)

(1) The level exceeded legal limit. Based on the detected level, it should not pose significant health effect on consumers.

(2) A commonly used preservative but is not permitted in this kind of food. It is of low toxicity and should not pose significant health effect on consumers.

5. Cereal, grains and products

Pathogens

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
Fired noodles with soy sauce	*Bacillus cereus*	1.1 x 10^6/ g (1)

Bacillus cereus may cause gastrointestinal upset such as vomiting, abdominal pain and diarrhoea.

6. Other food commodities

- About 2300 samples were collected. Overall satisfactory rate was 99.7%, with 6 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 & metallic contamination	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	Others
Sugar and sweets ❑ Pathogens, sweeteners, colouring matters & preservatives	

6. Other food commodities (Cont'd)

Chemical analysis

- Besides the 1 previously announced unsatisfactory sample of fried fritter found to contain boric acid, there were 2 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
Prickly ash	Rhodamine B & Crocein Scarlet 3B (colouring matter)	Detected (1)
Red bun	Rhodamine B	Detected (1)

The prickly ash is a follow-up sample of a previously announced unsatisfactory sample.

(1) Not permitted colouring matters in food.

6. Other food commodities (Cont'd)

Microbiological analysis

- 4 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
Rice with egg bean curd & minced pork	*Clostridium perfringens*	3.6×10^5 / g (1)
Rice with chicken wings & minced pork	*Clostridium perfringens*	5.2×10^6 / g (1)
Rice with grilled eel & chicken meat ball	*Bacillus cereus*	1.6×10^5 / g (2)
Walnut dessert	*Bacillus cereus*	1.4×10^6 / g (2)

(1) & (2) *Clostridium perfringens* 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.
- Hot summer is the season when food poisoning outbreaks occur most commonly. The trade should strengthen hygienic practices to ensure food safety. They include to cook all food thoroughly and serve as soon as it is done. Keep food at safe temperatures (4°C or below; above 60 °C). If the cooked food required cooling, the cooling process should be shortened. For those required reheating, they should be thoroughly heated until the centre temperature reaches 75 °C or above.
- The other unsatisfactory samples were mainly related to the use of excessive/non-permitted food additives such as colouring matters, preservatives, pesticide residues and veterinary drug 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.