2008 Food Safety Report No. 1

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

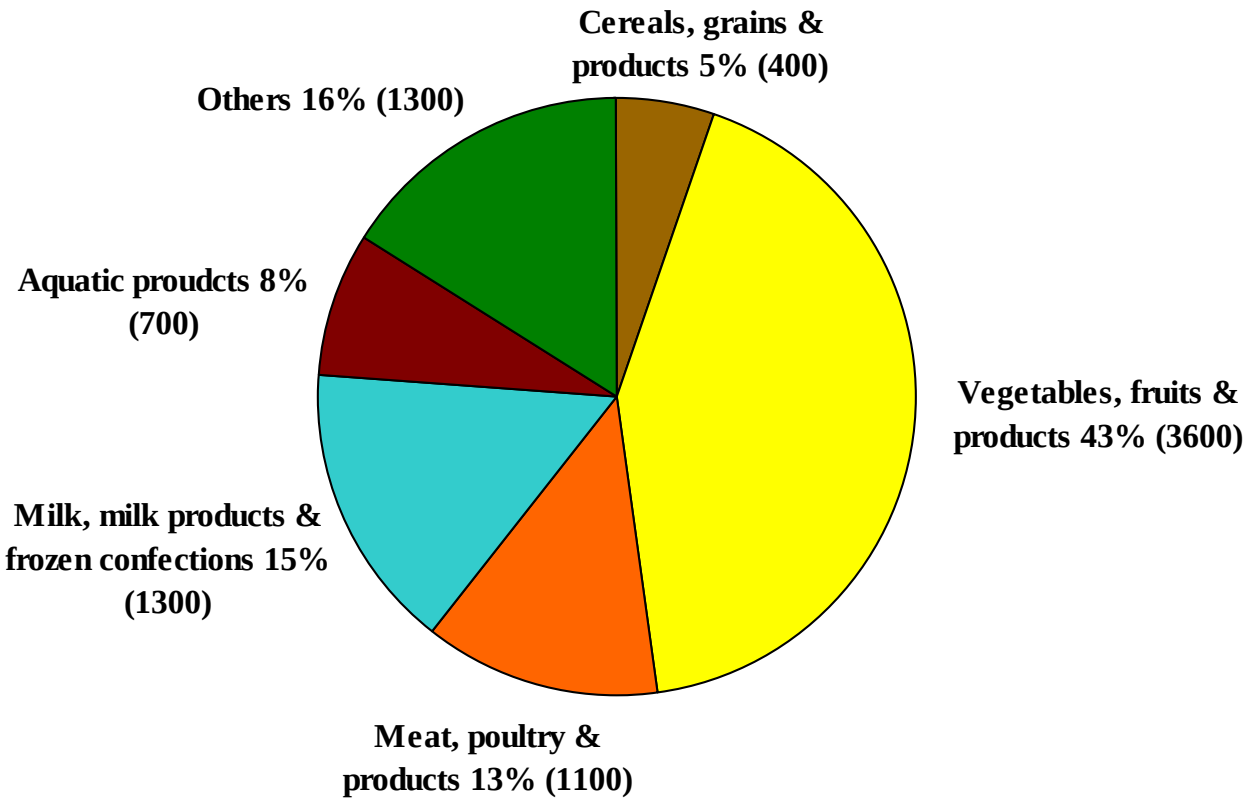
- In the light of the experience gained in 2007, the Centre for Food Safety (CFS) maintains the three-tier food surveillance approach i.e. routine food surveillance, targeted food surveillance and seasonal food surveillance in 2008, and collect samples at import, wholesale and retail levels for chemical and microbiological testing.

- In January, CFS announced a seasonal food surveillance project about “Chinese New Year Food” to allow the public to obtain timely information on food safety.

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

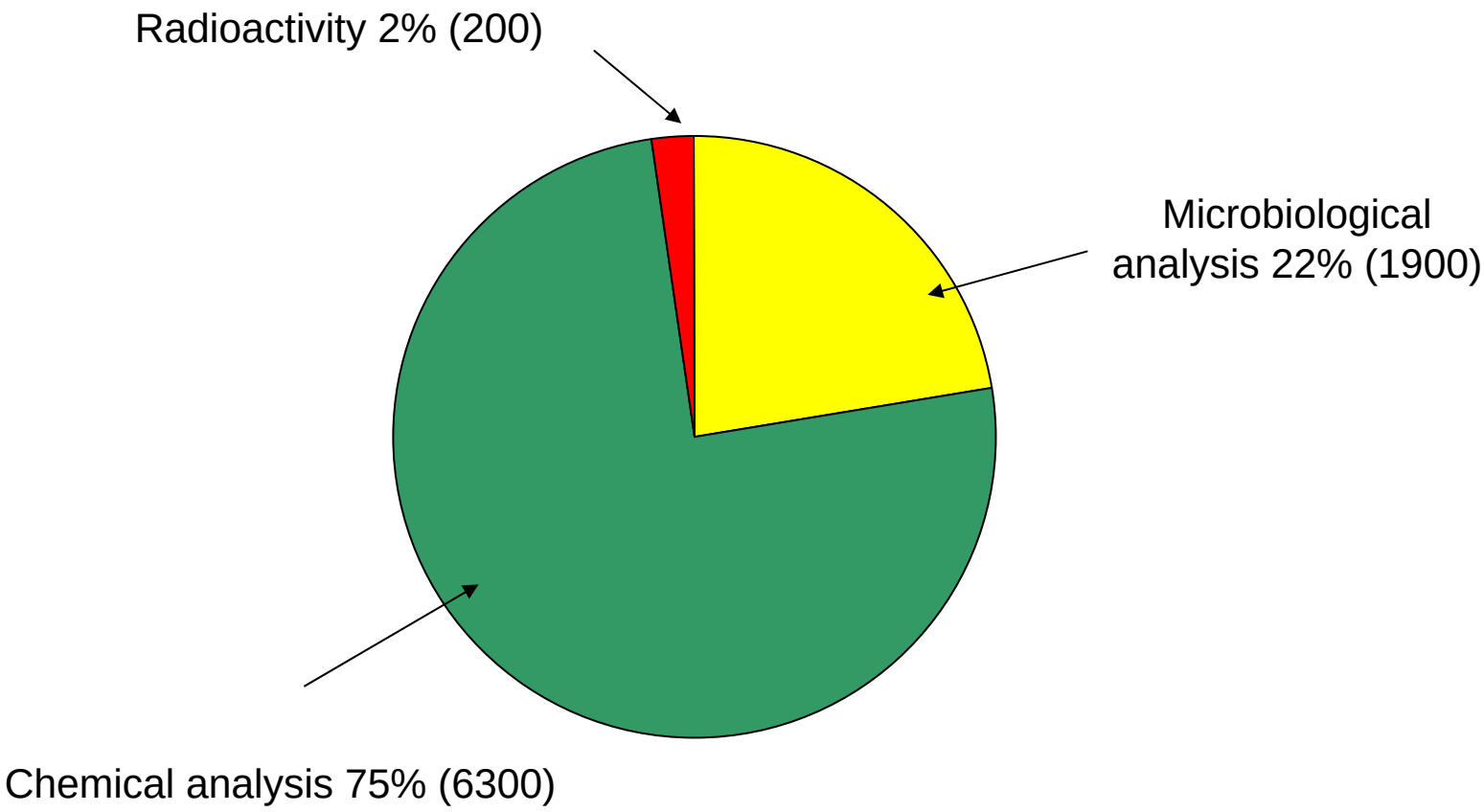
Types of food tested

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



N.B.: Figures in brackets are rounded

Types of testing



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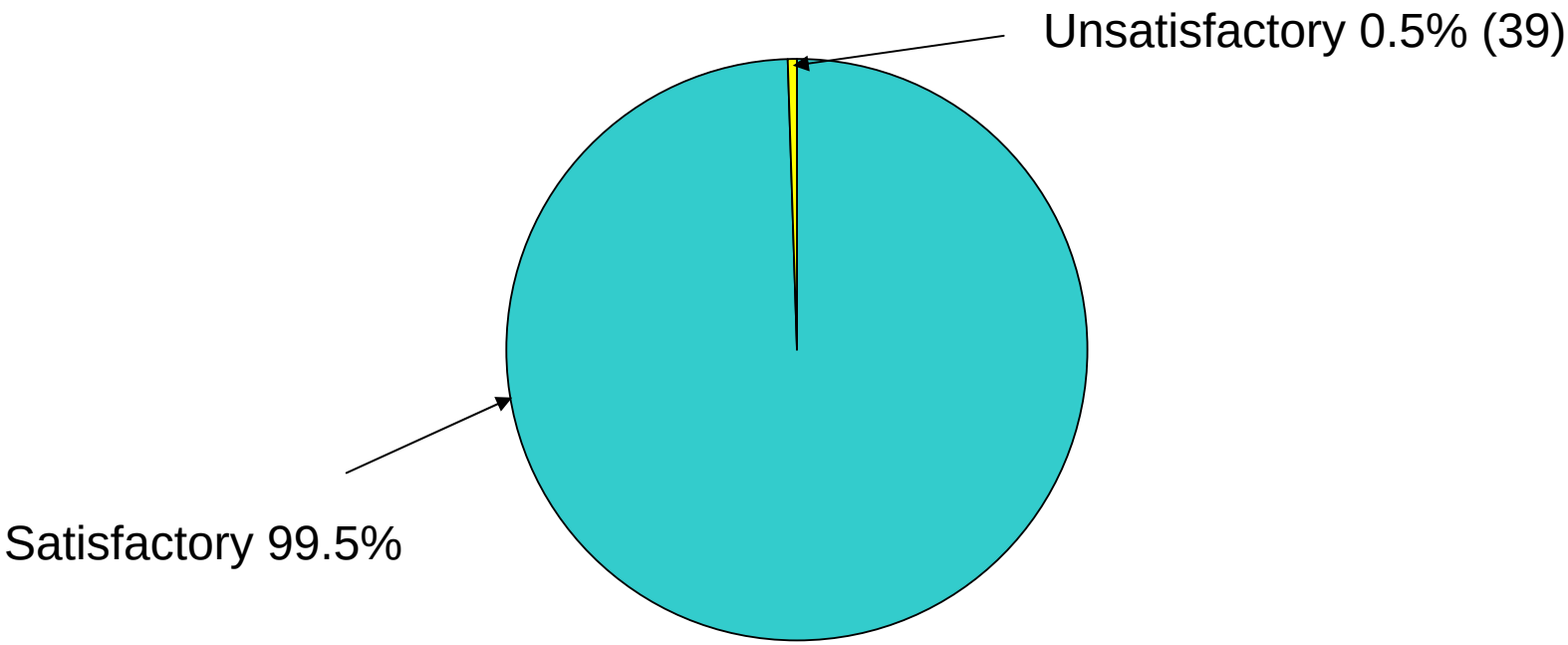
Overall results

- Overall satisfactory rate was 99.5%.
- Total 39 unsatisfactory samples



Unsatisfactory samples

- 39 unsatisfactory food samples included 18 previously announced results. The remaining 21 unsatisfactory samples are as follows:

Food Group	***No. of Samples Tested***	***No. of Unsatisfactory Samples***
Vegetables, fruits & products	3600	9
Meat, poultry & products	1100	3
Aquatic products	700	3
Milk, milk products & frozen confections	1300	0
Cereal, grains and products	400	2
Others	1300	4
Total	***8400***	***21***

1. Vegetables, fruits & products

- About 3600 samples were collected. Overall satisfactory rate was 99.5%, with 9 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

- All samples tested for pesticide residues were satisfactory.

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

Preservatives

- Besides the 10 previously announced unsatisfactory Chinese New Year food samples, there were 5 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 preserved Sichuan mustard	Sulphur dioxide Benzoic acid	1000 ppm (1) 2400 ppm (1)
1 preserved turnip	Sulphur dioxide	1800 ppm (1)
1 dried radish	Benzoic acid	2100 ppm (1)
1 sweet & sour ginger	Benzoic acid	540 ppm (1)
1 dried bamboo fungus	Sulphur dioxide	5900 ppm (1)

(1) 1 dried bamboo fungus was a follow-up sample of a previous unsatisfactory sample. 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

- 2 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 dried black moss	Cadmium	1.7 - 1.8 ppm (1)

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

Colouring matters

- 2 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 red bean curd	Orange II	Detected (2)

(2) Not permitted colouring matter in food. It is of low toxicity and should not pose significant health effects on consumers.

2. Meat, poultry & products

- About 1100 samples were collected. Overall satisfactory rate was 99.7%, with 3 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

- All samples completed tests for veterinary drug residues in January and February were satisfactory. However, CFS detected trace amount of clenbuterol in a canned pork sample under the food surveillance programme recently. Based on the detected level of 0.0027 ppm, it is unlikely to pose adverse effect on consumers.

Preservatives

- 3 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 beef	Sulphur dioxide	20 ppm (1)
1 lamb leg	Sulphur dioxide	410 ppm (1)
1 pork ribs	Benzoic acid	420 ppm (2)

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

3. Aquatic products

- About 700 samples were collected. Overall satisfactory rate was 98.9%, 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 the previously announced unsatisfactory samples of minced fish, bream fillet and clam meat found to contain malachite green, all samples tested for veterinary drug residues were satisfactory.

Preservatives

- Except one previously announced unsatisfactory sample of Chinese New Year food, all samples tested for preservatives were satisfactory.

Biotoxins

- All samples tested for biotoxins were satisfactory.

3. Aquatic products (Cont'd)

Metallic contamination

- 2 unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
2 swordfish sashimi	Mercury	0.94 – 1.8 ppm (1)

(1) Occasional consumption would not cause adverse health effect, but consumption on a long-term basis could exceed safety level.

Microorganisms

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
1 raw oyster	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.

- Analysis included:
  - Microbiological tests (total bacterial count, pathogens, e.g., *Salmonella* and *Listeria monocytogenes*)
  - Chemical tests (preservatives, colouring matters, sweeteners)

- All results were satisfactory.

5. Cereal, grains and products

- About 400 samples including bread, crackers, rice and noodles, etc.
- Overall satisfactory rate was 99.3%. There were 2 unsatisfactory samples to be announced in this report.
- Analysis included microbiological and chemical tests such as:
  - sweeteners
  - colouring matters
  - pesticide residues
  - preservatives

5. Cereal, grains and products

Preservatives

- Except one previously announced unsatisfactory sample of Chinese New Year food, all other samples tested for preservatives were satisfactory.

Metallic contamination

- 2 unsatisfactory samples :

Sample	Unsatisfactory testing item	Result
2 rice vermicelli	Cadmium	0.24 ppm (1)

(1) One rice vermicelli was a follow up sample of a previously unsatisfactory sample. The level is low and should not pose significant health effect on consumers.

6. Other food commodities

- About 1300 samples were collected. Overall satisfactory rate was 99.5%, with 4 unsatisfactory samples in this report.
- Types of food included:

Mixed dishes ❑ Pathogens, colouring matters & preservatives	Condiments and sauces ❑ Colouring matters & preservatives
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	Others
Sugar and sweets ❑ Pathogens, sweeteners, colouring matters & preservatives	

6. Other food commodities (Cont'd)

Chemical analysis

- Besides 3 previously announced Chinese New Year food samples there were 3 other unsatisfactory samples:

Sample	Unsatisfactory testing item	Result
1 chocolate	Sorbic acid (preservative)	320 ppm (1)
1 pork roll	Clenbuterol (beta-agonist)	0.0025 ppm (2)
1 red bun	Rhodamine B (colouring matter)	Detected (3)

(1) 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.

(2) Prohibited substance but the level is low. Upon normal consumption, it is unlikely to pose adverse effect on consumers.

(3) Not permitted colouring matter in food.

6. Other food commodities (Cont'd)

Microbiological analysis

- 1 unsatisfactory sample:

Sample	Unsatisfactory testing item	Result
1 rice with curry chicken	Clostridium perfringens (pathogen)	10^5/ g (1)

(1) Clostridium perfringens may cause gastrointestinal upset such as 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

- In most cases, the exceedances or breaches were not serious and would not pose immediate health risks.
- As for the plain rice with curry chicken and raw oysters samples found to carry pathogen and nucleic acid of norovirus respectively, they may cause gastrointestinal upset such as abdominal pain, vomiting and diarrhoea.
- For the mercury level detected in the swordfish sashimi samples, occasional consumption would not cause adverse health effect, but consumption on a long-term basis could exceed safety level and cause adverse effect to the nervous system. Pregnant women, infants and young children are especially more sensitive to such toxic effects.
- The other unsatisfactory samples were mainly related to the use of excessive/non-permitted food additives, metallic contamination and colouring matters.

Advice for trade

- Use only permitted food additives, follow good manufacturing practice and comply with legal requirements.
- Source food from reliable suppliers. Maintain a good recording system to allow source tracing if needed.
- Inform customers the type of fish served or used in the fish products
- Keep food at safe temperatures (4ºC or below; 60 ºC or above). For food that required reheating, it should be thoroughly heated until the centre temperature reaches 75 ºC or above.

Advice for consumers

- Patronize licensed restaurants and eat seafood which have been thoroughly cooked to reduce risk of food poisoning.
- Buy food from reliable food premises.
- High-risk groups such as children, pregnant women and women planning for pregnancy should avoid eating large predatory fish such as swordfish and tuna.
- Most sulphur dioxide in dried vegetables could be removed by thorough soaking, washing & cooking.
- Maintain a balanced diet to minimize risk.