2007 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

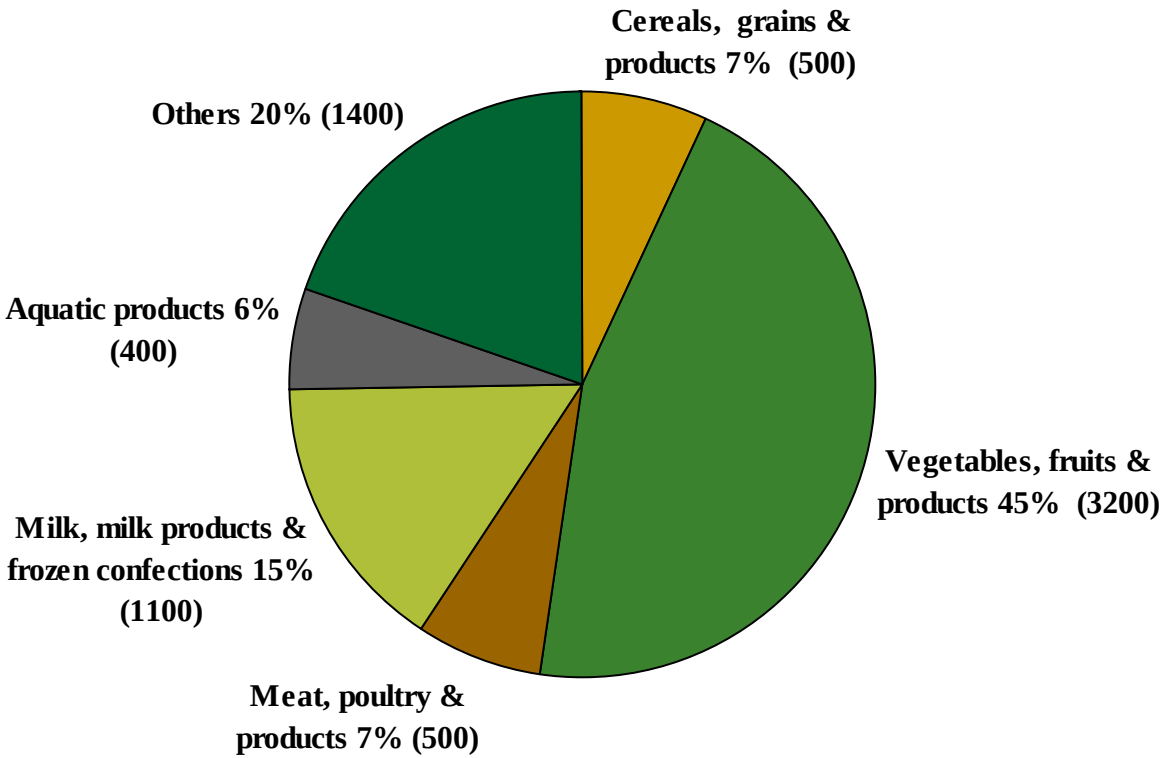
- Under the food surveillance programme of the Centre for Food Safety (CFS), food samples are collected at import, wholesale and retail levels of the market for microbiological and chemical analysis.

- Starting from 2007, CFS will strengthen its targeted and seasonal food surveillance in addition to the baseline routine surveillance.

- This presentation gives an account of the food surveillance sample analyses that were completed in January and February 2007.

Types of food tested

- 7100 food samples of various food groups were tested



N.B.: Figures in brackets are rounded

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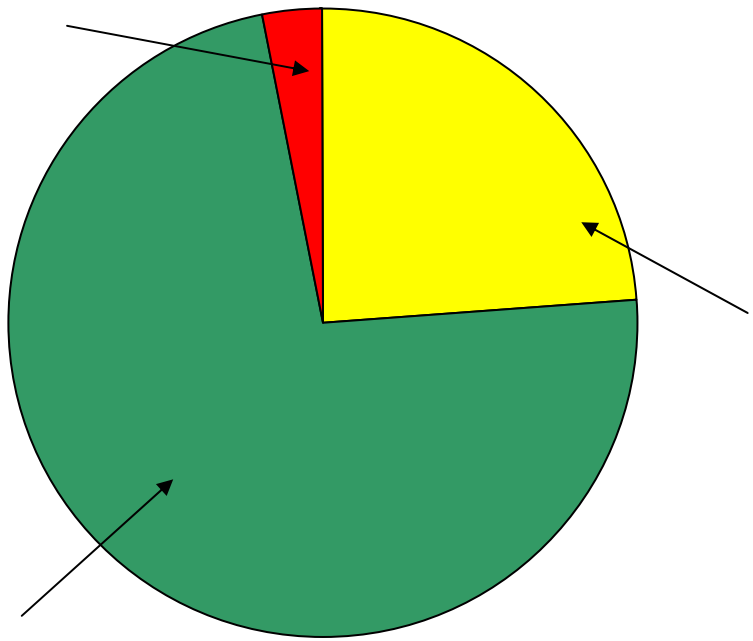
Types of testing



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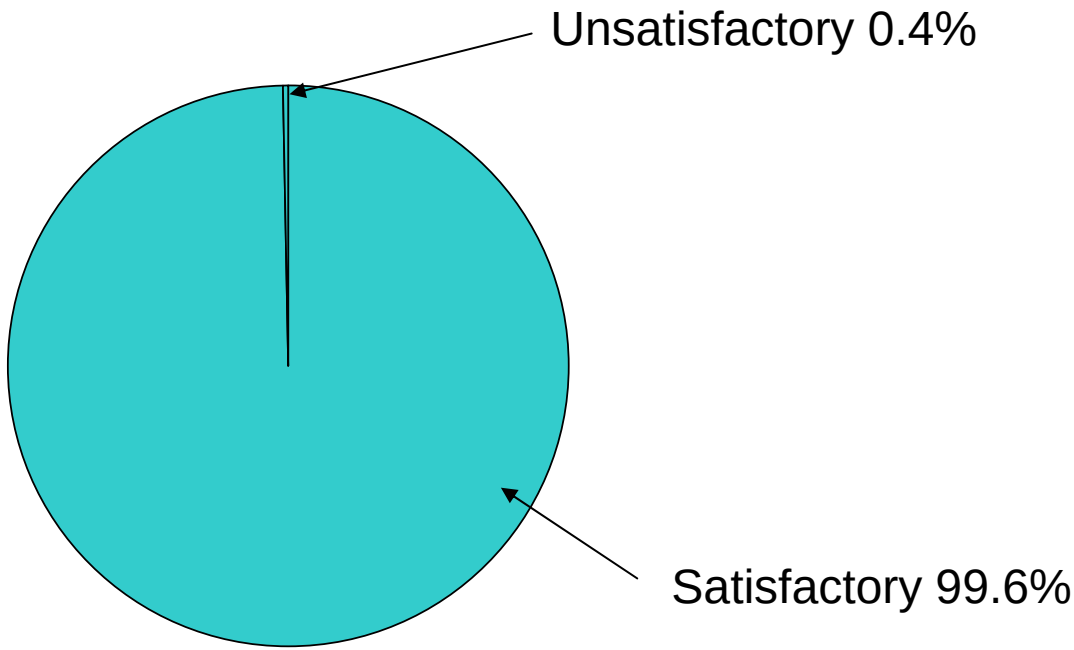
Overall results

- Overall satisfactory rate was 99.6%.
- Totally 28 unsatisfactory samples



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Unsatisfactory samples

- 28 unsatisfactory food samples included 17 previously announced results (14 Chinese New Year food samples and 3 turbot fish samples)
- The remaining 11 unsatisfactory samples included:

Vegetables, fruits & products	Green peas	2
	Spring Onion	1
	Dried raisin	1
Meat, poultry & products	Fresh beef	1
	Sliced gizzard with preserved vegetables	1
Aquatic products	Shrimp	1
Cereals, grains and products	Flat noodles	1
Others	Noodle snack	1
	Curry paste	1
	Pan fried pork dumplings	1

1. Vegetables, fruits & products

- About 3200 samples with overall satisfactory rate 99.6%
- 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

Pesticide residues

- Pesticide residues were detected in 12 (0.4%) samples, one of which was at unsatisfactory level.

Metallic contamination

- All samples tested for metallic contamination were satisfactory

Colouring matters

- Samples of sweet potatoes were tested for colouring matters and all the results were satisfactory.

1. Vegetables, fruits & products

- Besides 9 unsatisfactory samples previously announced as results of surveillance on Chinese New Year food, the remaining 4 unsatisfactory samples included:

Samples	Unsatisfactory testing item	Results
▪ 1 Spring Onion	Methamidophos (pesticide)	11 ppm[1]
▪ 2 Green peas	Brilliant Blue FCF & Tartrazine (colouring matters)	Detected[2]
▪ 1 Dried raisin	Sulphur dioxide (preservative)	2300 ppm[3]

[1]The level is low and should not pose significant health effect on consumers.
[2]Permitted colouring matters in certain food but are not for fresh vegetables.
[3] A commonly used preservative. The level is low and should not pose significant health effect on consumers

2. Meat, poultry & products

- About 500 samples and overall satisfactory rate was 99.6%
- Analysis included microbiological and chemical tests (veterinary drug residues, preservatives, colouring matters and other food additives)
- 2 unsatisfactory samples were:

Samples	Unsatisfactory testing item	Results
▪ Fresh beef ▪ Sliced gizzard with preserved vegetables	Sulphur dioxide (preservative) Benzoic acid (preservative)	98 ppm[1] 310 ppm[2]

[1] A commonly used preservative. The level is low and should not pose significant health effect on consumers.

[2] A commonly used preservative of low toxicity that should not pose significant health effect on consumers

2. Meat, poultry & products

Veterinary drug residues

- All results were satisfactory for testing on veterinary drug residues including
  - antibiotics (e.g., chloramphenicol)
  - beta-agonist (clenbuterol) and
  - synthetic hormones.

Pathogens

- All samples tested for the presence of pathogens (e.g., *Salmonella, staphylococcus aureus, Clostridium perfringens and Bacillus cereus)* were satisfactory.

3. Aquatic products

- About 400 samples and overall satisfactory rate was 99.1%.

- Analysis included microbiological and chemical tests (veterinary drug residues, colouring matters, metallic contamination and preservatives)

Veterinary drug residues

- Besides 3 unsatisfactory samples announced previously as results of surveillance on turbot fish, all aquatic products tested for veterinary drug residues were satisfactory.

Metallic contamination

- 1 sample of shrimp was found to contain excessive level of arsenic:

Samples	Unsatisfactory testing item	Results
1 Shrimp	Arsenic (Metallic contamination)	20 ppm[1]

[1] The level is low and should not pose significant health effect on consumers.

4. Milk, milk products & frozen confections

- Totally 1100 samples which included ice-cream, cheese, yogurt, milk and milk products, etc.
- Analysis included microbiological (e.g., *Salmonella* and *Listeria monocytogenes*) and chemical tests (preservatives, colouring matters, sweeteners and others).
- All results were satisfactory.

5. Cereal, grains and products

- About 500 samples including bread, crackers, rice and noodles, etc
- Overall satisfactory rate was 99.8%.
- Analysis included microbiological and chemical tests including
  - sweeteners
  - colouring matters
  - pesticides
  - preservatives and
  - others

5. Cereal, grains and products

Pesticide residues

- All samples tested for pesticide residues were satisfactory

Food additives

- 1 unsatisfactory sample:

Samples	Unsatisfactory testing item	Results
Flat noodles	Benzoic acid (preservative)	340 ppm[1]

[1]A commonly used preservative of low toxicity but is not permitted for use in flat noodles

6. Other food commodities

- About 1400 samples and overall satisfactory rate was 99.4%.

- Testing included microbiological and chemical analysis.

Colouring matters in condiments and sauces

- All results (including Sudan dyes) were satisfactory.

6. Other food commodities

- Besides 5 unsatisfactory samples announced previously as results of surveillance on Chinese New Year Food, there were another 3 unsatisfactory samples:

Samples	**Unsatisfactory testing item**	**Results**
Noodle snack	Stevioside (artificial sweetener)	Detected[1]
Pan fried pork dumplings	Salmonella (pathogens)	Detected[2]
Curry paste	Sorbic acid (preservative)	680 ppm[3]

[1]A sweetener of low toxicity and should not pose significant health effect on consumers
[2]Salmonella may cause gastrointestinal upset such as abdominal pain and diarrhoea.
[3]A commonly used preservative of low toxicity. The level is low and should not pose significant health effect on consumers.

7. Chinese New Year Food

- About 600 samples tested with overall satisfactory rate of 97.7%.
- Samples covered various Chinese New Year foods (e.g., steamed puddings, fried dumplings, sweetened fruits & vegetables, seeds, dried vegetables & dried soybean products, preserved meat, poon choi and tea leaves)
- Analysis included microbiological (e.g., *food poisoning organisms*) and chemical tests (e.g., preservatives, colouring matters, metallic contamination and pesticides).

7. Chinese New Year Food

- Totally 14 unsatisfactory samples:

Unsatisfactory samples	Fail test items	Results
1 Turnip pudding	Benzoic acid (preservative)	450 ppm[1]
4 dried daylily flowers	Sulphur dioxide (preservative)	3800 – 9500 ppm[2]
2 bamboo fungus	Cadmium (heavy metal) Sulphur dioxide (preservative)	2.1 ppm[3] 3300 ppm[2]
1 Poon Choi	Clostridium perfringens & Bacillus cereus (pathogens)	Detected[4]
6 Chinese candies	Sulphur dioxide (preservative)	680 – 2800 ppm[5]

[1]A commonly used preservative of low toxicity but is not permitted to be used in turnip pudding.
[2] Most sulphur dioxide in dried vegetables will be removed by thorough soaking, washing & cooking.
[3]The level is low and should not pose significant health risk to consumers.
[4]Pathogens may cause gastrointestinal upset such as abdominal pain and diarrhoea.
[5]A commonly used preservative. The levels were low and should not pose significant health effect on consumers.

7. Chinese New Year Food

Sudan dyes

- No Sudan dyes was detected in food samples.

Pesticide residues

- All samples of tea leaves tested for pesticides residues were satisfactory.

Major findings

- The unsatisfactory samples were mainly related to the use of excessive or non-permitted preservatives (such as sulphur dioxide & benzoic acid).

- Except for the sample of poon choi with pathogens *Clostridium perfringens* and *Bacillus cereus*, none of the unsatisfactory samples posed significant health risk to consumers.

Follow up actions

- Tracing the source of food in question
- Asking concerned retailers to stop selling those concerned food items
- Taking follow-up samples
- Issuing warning letters

Summary

- In summary, the exceedances or breaches were not serious and would not pose immediate health risks.
- As for the food sample with *Salmonella*, the pathogen may cause gastrointestinal discomfort, such as abdominal pain and diarrhoea.
- The unsatisfactory samples were mainly related to the use of excessive or non-permitted food additives (such as preservatives, colouring matters or sweeteners).
- Regarding the unsatisfactory samples, the CFS has taken follow-up actions.

Advice for trade

- Use only permitted food additives, follow good manufacturing practice and comply with legal requirements.

- When preparing food, especially for those involving intensive preparations :
  - Maintain good personal hygiene;
  - Wash raw materials thoroughly;
  - Cook food thoroughly;
  - Separate raw food from ready-to-eat food to prevent cross contamination; and
  - Keep food at safe temperatures (4^{o}C or below; 60 ^{o}C or above).

Advice for consumers

- Patronize licensed restaurants and reliable suppliers of food.
- Keep food not for immediate use at safe temperatures (4^{o}C or below; 60 ^{o}C or above).
- Maintain a balanced diet to minimize risk.