
Survey on Popular Food Items: Chinese Breakfast

Centre for Food Safety

Food and Environmental Hygiene Department

May 2008

Background

- Breakfast provides energy required for the morning and is an essential meal.
- Chinese-style breakfast items are popular among consumers. Therefore, their safety is an issue of public concern.
- In view of this, the Centre for Food Safety (CFS) recently conducted a food surveillance project to assess the safety of Chinese breakfast items.

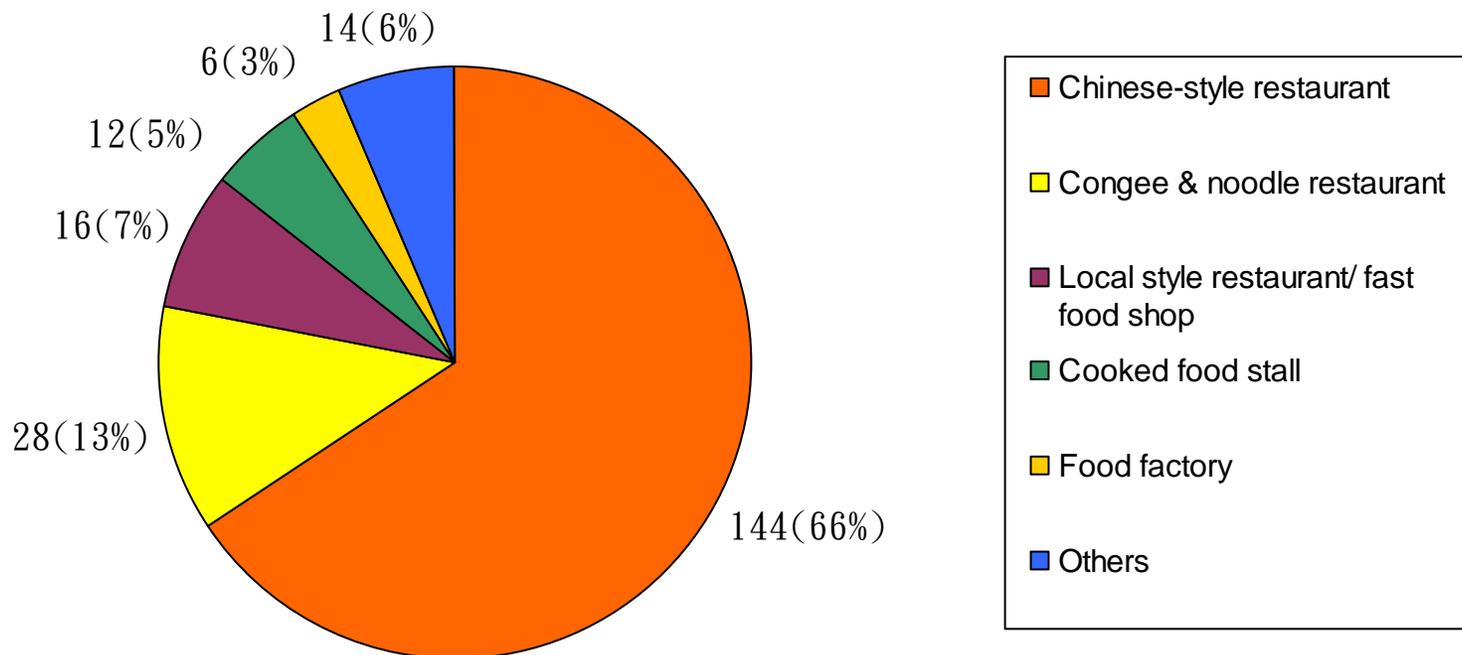
Types of food tested

- 366 samples of various Chinese breakfast items were collected for testing.

| Type of food | No. of samples | Percentage |
|--------------------------------------|----------------|-------------|
| Steamed food and steamed bun | 172 | 47% |
| Rice-roll, congee and rice dumpling | 93 | 25% |
| Pan-fried, deep-fried and baked food | 43 | 12% |
| Dessert | 32 | 9% |
| Cattle offal and others | 26 | 7% |
| Total | 366 | 100% |

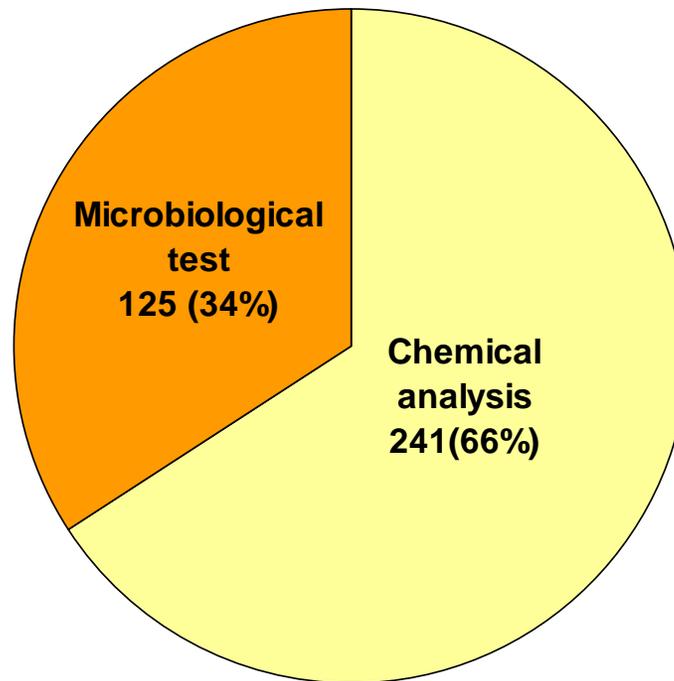
Sampling locations

- Samples were collected from 220 locations which covered Chinese-style restaurants, congee and noodle restaurants, local style restaurants or fast food shops, cooked food stalls and food factories, etc.



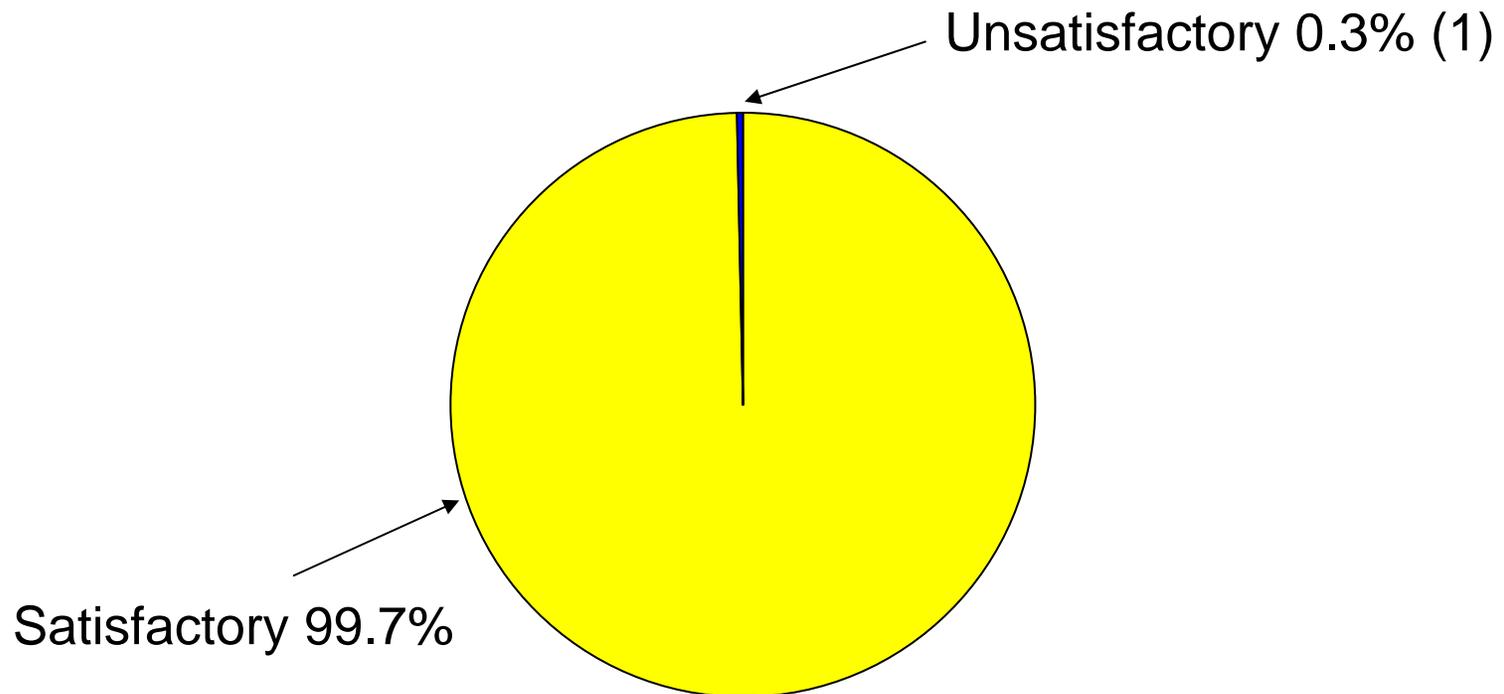
Types of analysis

- Microbiological testing (pathogens such as *bacillus cereus*, *salmonella*, *clostridium perfringens*, *staphylococcus aureus* and *vibrio parahaemolyticus*)
- Chemical analysis (colouring matters and preservatives such as benzoic acid, sorbic acid, boric acid, parabens, salicylic acid and sulphur dioxide)



Overall results

- Only one of the 366 samples was unsatisfactory. Overall satisfactory rate was 99.7%.



Steamed food & steamed bun

- Samples include steamed minced beef ball, fish ball, steamed chicken with fish maw, steamed beancurd sheet roll with chicken, steamed beancurd sheet roll with duck feet, vegetable dumpling, Chiu Chow-style steamed dumpling, steamed fresh prawn dumpling, steamed stuffed dumpling, pork rib, chicken feet, steamed beancurd sheet roll, steamed glutinous rice roll, mini-sized sticky rice wrapped in lotus leaf and sticky rice wrapped in lotus leaf, steamed barbecued pork bun, steamed egg custard bun, steamed pumpkin bun, steamed sweet molten bun, steamed vegetable and meat bun, steamed lotus seed paste bun, steamed chicken bun, Chinese plain bun, baked barbecued pork bun and steamed sago dumpling.



Steamed food & steamed bun (cont'd)

- Steamed food & steamed bun are usually served hot to customers. However, inadequately cooked or reheated items may contain foodborne pathogens. Hence, pathogens are covered in microbiological testing.
- Chemical analysis includes testing of preservatives and colouring matters for intensifying colour of food (e.g., chicken feet).
- Results shows that all samples are satisfactory.

Rice-roll, congee & rice dumpling

- Samples include different kinds of rice-roll and fried fritters wrapped in rice-rolls, commonly consumed congee with pig giblets, congee with fish ball, congee with preserved egg and pork, congee with dried fish and peanut, congee with slices of fish, congee with beef, congee with minced beef, congee with pig kidney and liver, "Boat" congee, congee with chicken and plain congee and various rice dumplings.



Rice-roll, congee & rice dumpling (cont'd)

- Preparation of rice-roll involves multiple manual handling steps. Inadequate reheating may facilitate the growth of *bacillus cereus* in such cereal products.
- Pathogens may be present in congee with inadequately cooked ingredients.
- The CFS also tested for the use of preservatives (e.g., boric acid) in ingredients of rice-roll, congee and rice dumplings.
- All samples tested for pathogens and preservatives are satisfactory.

Pan-fried, deep-fried and baked food

- Samples include baked barbecued pork puff, deep-fried taro dumpling, deep-fried spring roll, deep-fried wonton, deep-fried meat dumpling, small sesame ball, taro cake, sweetened water chestnut cake, turnip cake and fried vegetables with minced meat and fried fritter.



Pan-fried, deep-fried and baked food (Cont'd)

- The pan-fried, deep-fried and baked food are usually prepared by batches in advance. Inappropriate storage condition, e.g., keeping together with raw food, storing within dangerous temperature zone (4 - 60°C) for prolonged period of time, may increase the risk of cross contamination and bacterial growth.
- Separately, there may be use of preservatives to prevent deterioration of food in some food premises.
- All samples are satisfactory for pathogens. 1 sample is tested unsatisfactory for preservative.

| Sample | Unsatisfactory testing item | Result |
|---------------|-----------------------------|-------------------------|
| Fried fritter | Boric acid | 1000 ppm ⁽¹⁾ |

⁽¹⁾ Based on the detected level, it should not pose significant health effect on consumers upon normal consumption.

Dessert

- Samples include multi-layer cake, osmanthus pudding, "Mai-lai" cake, egg tart and sponge cake.
- Colourful desserts are especially attractive to consumers. Therefore, apart from pathogens and preservatives, testing of colouring matters is also covered.
- All samples are satisfactory.



Cattle offal and others

- Samples include cattle offal, cattle tripe, beef omasum and Chinese sticky rice roll.
- The objective of testing is to investigate if there is inappropriate use of food additives in cattle offal. For example, use of salicylic acid and boric acid to enhance texture and to preserve food. Another example is the use of colouring matter to intensify colour of food.
- Testing of pathogens in other food items is covered in this project.
- All samples are satisfactory.



Advice for trade

- The unsatisfactory sample involved use of non-permitted preservative in food. The trade should use only permitted food additives, follow good manufacturing practice & comply with legal requirements for manufacturing food products.
- Although all samples for microbiological testing are satisfactory, the trade should always comply with hygienic practices which include:
 - ❑ maintain good personal hygiene
 - ❑ wash raw materials thoroughly
 - ❑ cook food thoroughly
 - ❑ separate raw food from ready-to-eat food to prevent cross contamination
 - ❑ keep food at safe temperatures (4°C or below; 60 °C or above)

Advice for consumers

- Purchase from licensed and reliable food premises.
- Do not eat food which is undercooked or of abnormal texture, colour and taste.
- Maintain a balanced diet to minimize risk. Avoid eating too much food with high energy, sugar, fat and/ or cholesterol.