Review of Local/Regional Food Incidents Relating to Food Additives

Dr Raymond HO

Principal Medical Officer (Risk Management)

Centre for Food Safety

Food and Environmental Hygiene Department

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Layout of Presentation

- Food safety framework in Hong Kong
- Legal framework for regulation of food additives in Hong Kong
- Food surveillance programme for food additives
- Case examples of local food additive incidents

Organization of FEHD and CFS

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Vision and Mission of CFS

- CFS was established on 2 May 2006.
- To be a leading food authority that commands the confidence of all stakeholders in protecting the health of the people
- To ensure food sold in Hong Kong is safe and fit for consumption through tripartite collaboration among the Government, food trade and consumers

Approach

- The CFS adopts a food safety **risk analysis framework** promulgated by international food safety authorities
- which encompasses
  - Risk Assessment
  - Risk Management
  - Risk Communication

Approach

- Adopts Multi-disciplinary Integrated Approach

From “Farm to Table”

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Legal Framework for the Control of Food Additives

Legal Framework

- The basic food law in Hong Kong is laid down in **Part V of the Public Health and Municipal Services Ordinance (Cap. 132)**.
- Main provisions cover
  - general protection for food purchasers
  - offences in connection with sale of unfit food and adulterated food
  - composition and labelling of food
  - food hygiene
  - seizure and destruction of unfit food
- Controls in specific areas are provided in subsidiary legislation under the Ordinance as detailed below.

Subsidiary Legislation on Food Additives

- Preservatives in Food Regulation (Cap 132 BD)
- Colouring Matter in Food Regulations (Cap 132 H)
- Sweeteners in Food Regulations (Cap 132 U)

Legal Framework

- Cap.612: **Food Safety Ordinance**
  - Registration scheme
    - Food importers
    - Food distributors
  - Maintain proper records of movements of food
    - Enhance food traceability
  - Food Safety Orders
    - Prohibit import and supply of problem food
    - Order recall

Food Surveillance Programme for Food Additives

Food Surveillance Programme

- Food surveillance is a key component of risk management on the use of food additives.
- CFS takes 65000 samples per annum and the surveillance programme is endorsed by the Expert Committee on Food Safety.
- Monitor foods offered for sale to ensure their compliance with legal requirements & fitness for human consumption

Food surveillance plan development

- Factors considered
  - Previous food surveillance results
  - Epidemiology of foodborne diseases & field investigation data
  - Local and overseas food incidents
  - Amendment of regulations

3-tier surveillance strategy

- Routine food surveillance
- Targeted food surveillance
- Seasonal food surveillance

Targeted food surveillance

- Focus on specific foods & hazards of concern
  - Preservatives in preserved fruits and vegetables
  - Sulphur Dioxide in Meat
  - Nitrate and nitrite in meat, meat products and cheese
  - Sudan dyes in eggs and egg products

Seasonal food surveillance

- Projects on festive or seasonal foods
  - Rice dumplings at Tuen Ng Festival
    - colouring matters (e.g. sudan dyes, red 2G)
    - preservatives (e.g. boric acid, salicylic acid and benzoic acid)
  - Mooncakes at Mid-Autumn Festival
    - Colouring matters (e.g. Sudan dyes, tartrazine)
    - Preservatives (e.g. sulphur dioxide, sorbic acid)

Seasonal food surveillance

- Projects on festive or seasonal foods
  - Lunar New Year Food
    - preservatives (e.g. sulphur dioxide, benzoic acid, formaldehyde)
    - colouring matters (e.g. Sudan dyes)
    - antioxidants

- Provide timely information during the season & prior to the festivals for
  - consumers to make wise choices
  - the trade to take appropriate measures

Sample collection

- Samples of food items collected at different levels:
  - Import level
  - Wholesale level
  - Retail level

Food Incident Surveillance

- Monitor both local and overseas food incidents and take appropriate follow up actions

- Include reports on food safety issued by
  - Food authorities ;
  - Media agencies ;
  - Informed by food production company

- CFS assesses their local significance and takes follow-up actions to address any food safety risk and concern that may be identified

Follow-up actions for unsatisfactory samples

- Risk assessment
  - Hazard
    - levels
    - acute & chronic health effects
  - Target consumers
    - High risk (e.g. infant, pregnant, elderly)
    - Food consumption level

- Other considerations
  - Popular food
  - Famous brand
  - Public interest

Follow-up actions for unsatisfactory samples

- Disposal of affected food products
- Trace source & distribution
- Imported products
  - Notify exporting authority for necessary actions (e.g. relevant CIQs / AQSIQ in Mainland, CG of country of origin)
  - “Hold & test” arrangement for further imported consignments where applicable
- May make Food Safety Order on affected products
  - Prohibit import and supply
  - Direct recall

Follow-up actions for unsatisfactory samples

- Inspection of food premises, advise on food safety measures
- Take follow-up sample for further testing
- Issue warning letter; and take out prosecution if sufficient evidence

Announcement of results

- Monthly
  - Food Safety Reports
- On completion of project
  - Targeted food surveillance reports
  - Seasonal food surveillance reports
- Soon after result is known
  - For food incidents of significant concerns
  - For individual unsatisfactory results that suggest immediate public health risk


Food Safety Report for December 2011

Centre for Food Safety
Food and Environmental Hygiene Department

January 2012

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Seasonal Food Surveillance on Rice Dumplings

Centre for Food Safety
Food and Environmental Hygiene Department

May 2011

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Alert on bottled fermented bean curd with possible contamination with a pathogen (with photo)

The Centre for Food Safety (CFS) today (July 13) advised people not to eat a kind of fermented bean curd cubes, pre-packed in bottles and manufactured in China, which might have been contaminated with Bacillus cereus, a pathogen. The trade should immediately stop selling or using the product.

A CFS spokesman said, "In response to a food complaint earlier, the CFS took a sample of bottled fermented bean curd cubes each from an importer and a distributor of food. The two samples are of the same brand but from different batches.

"The test results showed that both samples contained Bacillus cereus at excessive levels of 3.4 million per gram and 0.37 million per gram respectively. According to the 'Microbiological Guidelines for Ready-to-eat Food', it is potentially hazardous to consumers if over 0.1 million of Bacillus cereus per gram of food is detected."

Product details of the two unsatisfactory samples are as follows:

Product name: San Bu Bridge Kaiping Preserved Bean Curd
(1,000 grams per bottle)
Best before date: July 29, 2012 (Sample 1)
November 29, 2012 (Sample 2)
Manufacturer: Kaiping Chuang Feng Trading Company Limited of Guangdong
Place of origin: China

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Announcement of results

- Trade alert
  - Targeted at relevant trade, with nearly 37900 registered recipients
  - Delivered by facsimile / email
  - Issued about 290 trade alerts in 2013 to speed up risk management actions by the trade

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Review of Food Surveillance Results (2011-2013)

Surveillance results relating to food additives (2011-2013)

Food group	No. of unsatisfactory samples (2011-2013)	Major problems (no. of unsatisfactory samples)
Vegetables, fruits & products	10	Preservatives (10)
Meat, poultry & products	44	Preservatives (44)
Aquatic and related products	6	Preservatives (5) Colouring matters (1)
Milk, milk products & frozen confections	2	Preservatives (2)
Others (items not classifiable as above e.g. mixed dishes, products with multiple food components, various drinks, etc)	25	Preservatives (17) Antioxidants (1) Colouring matters(7)

Surveillance results relating to food additives (2011-2013)

- Use of sulphur dioxide in fresh meat
- Use of sulphur dioxide exceeding legal limits in dried food (fungus, candied lotus seeds, preserved pummelo, dried shrimps, etc.)
- Use of Sudan II in fermented red bean curds and pork sauce
- Levels of sulphur dioxide, benzoic acid and sorbic acid in preserved fruits/vegetable exceeding their legal limits

Case Examples – Sulphur Dioxide in Meat and Maleic Acid detected in Taiwanese products

Background

- Sulphur dioxide is a food preservative of low toxicity. It is also water-soluble and most of it tends to be removed through washing and cooking.

- For susceptible individuals who are allergic to sulphur dioxide, they may experience breathing difficulty, headache and nausea.

- Sulphur dioxide is a commonly used preservative in a variety of foods including

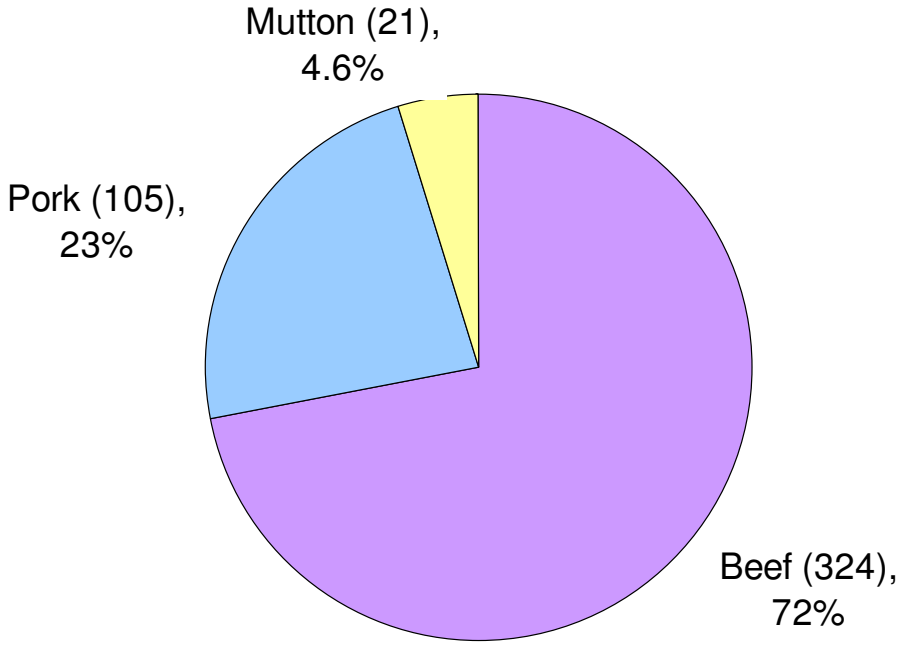
  - dried fruits
  - pickled vegetables
  - sausages

Background

- Under the law, sulphur dioxide is not permitted in fresh, chilled or frozen meat.
- Given the perishable nature of meat, individual meat traders have been found to use sulphur dioxide to make the colour of meat apparently fresher.
- The CFS has detected meat samples containing sulphur dioxide in recent years.
- The targeted food surveillance is designed to assess the use of sulphur dioxide in meat.

Types of meat samples tested

- In 2013, the CFS collected 450 samples for testing of sulphur dioxide.
- The sampling locations have covered the meat stalls which have previous records of selling meat containing sulphur dioxide.



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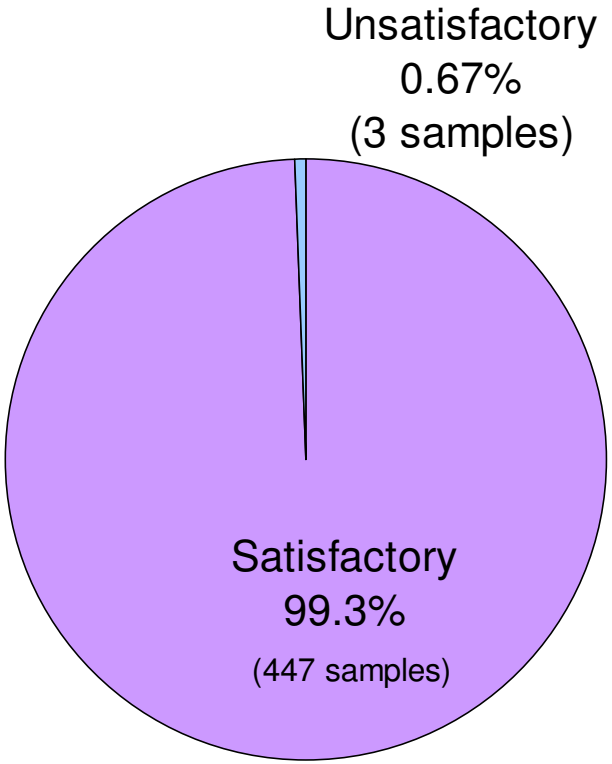
Overall results

- Overall satisfactory rate was 99.3%.



- 2 fresh beef samples and 1 fresh pork sample found to contain sulphur dioxide

Trend - Sulphur Dioxide in Meat

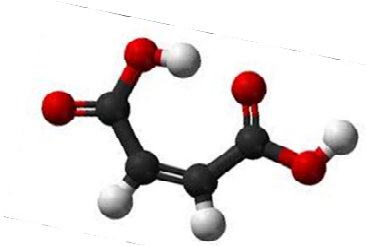
	2011	2012	2013
Total number of meat samples taken	350	352	450
Number of unsatisfactory sample	12	20	3
Percentage of unsatisfactory samples	3.4	5.7	0.67

Follow-up actions

- Issued warning letters to the vendors concerned.
- Took follow-up samples for analysis.
- Took prosecution actions if there is sufficient evidence.
- Kept close monitoring of the situation.

Maleic Acid

- **Incident**
  - **In May 2013, the authority of Taiwan reported that certain starch products were found containing maleic acid (順丁烯二酸) because of the abuse of starch modified by maleic acid**



- **Risk Assessment**
  - **Adverse health effect was unlikely**

- **Actions**
  - **Both Taiwan food authority and CFS' sales check confirmed affected batches of products were not available in local market**
  - **Samples taken were all satisfactory**
  - **Enhanced surveillance of food from Taiwan**

Acknowledgement

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Thank you