Food poisoning Measures for raw meat.

ISO/FS22000/HACCP Certification Registry
AUDIS Corporation
Chief Audit Officer
Emi Saito

APEC Scientific seminar workshop on Food Safety Risk Benefit Analysis
22-24 Nov 2011

Characterization of food safety systems

Traditional Food Safety System
- Reactive approach
- Obtain responsibility with government
- Ohio structured risk analysis
- Of the end product inspection and testing

Modern Food Safety System
- Preventive approach
- Established responsibility
- Addresses farm-to-table continuum
- Science based
- Of the structured risk analysis
- Establishes priorities
- Integrated food control
- Of the process control

Level of risk reduction: not always satisfactory
Level of risk reduction: improved

The main cause of food poisoning bacteria by eating raw meat be a problem

- Campylobacter
  - Most incidents of bacterial food poisoning occurred since 2003
  - Food poisoning bacteria
  - Often caused by eating raw meat like chicken and beef liver
  - In severity concomitant increase hemolytic uremic syndrome with encephalopathy may result in death
  - Enteroheemorrhagic E. coli food poisoning in the years 2003-2009 Case was found to cause the food is all related to meat
- Salmonella
  - Main symptoms of acute gastroenteritis due to food poisoning, sometimes lead to death
  - Widely distributed in meat and other animal’s intestinal tract is contaminated

Reports of enterohemorrhagic Escherichia coli infection

<table>
<thead>
<tr>
<th>年次</th>
<th>報告数</th>
<th>有症者</th>
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Incidence of major serotypes by enterohemorrhagic E. coli food poisoning

<table>
<thead>
<tr>
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<th>O157</th>
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<th>011</th>
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Cause food & Cause Facility

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<tr>
<th>材料</th>
<th>数量</th>
<th>負荷物</th>
<th>数量</th>
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<tr>
<td>肉類</td>
<td>50</td>
<td>負荷物</td>
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<tr>
<td>魚類</td>
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<td>負荷物</td>
<td>5</td>
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<tr>
<td>鶏肉</td>
<td>5</td>
<td>負荷物</td>
<td>5</td>
</tr>
<tr>
<td>野菜</td>
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<td>負荷物</td>
<td>5</td>
</tr>
<tr>
<td>果物</td>
<td>5</td>
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<td>水産品</td>
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<td>5</td>
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<tr>
<td>鶏卵</td>
<td>5</td>
<td>負荷物</td>
<td>5</td>
</tr>
<tr>
<td>その他</td>
<td>5</td>
<td>負荷物</td>
<td>5</td>
</tr>
</tbody>
</table>

Food poisoning bacteria are a problem since 2003. Most incidents of bacterial food poisoning occurred since 2003. Food poisoning bacteria often caused by eating raw meat like chicken and beef liver. In severity concomitant increase hemolytic uremic syndrome with encephalopathy may result in death. Enteroheemorrhagic E. coli food poisoning in the years 2003-2009 Case was found to cause the food is all related to meat. Salmonella main symptoms of acute gastroenteritis due to food poisoning, sometimes lead to death. Widely distributed in meat and other animal’s intestinal tract is contaminated. Reports of enterohemorrhagic Escherichia coli infection. Incidence of major serotypes by enterohemorrhagic E. coli food poisoning. Cause food & Cause Facility.
Eaten raw meat (beef) for Background of Food Safety Assessment

From April through May 2011, caused by eating raw meat is considered Food poisoning incident in enterohemorrhagic E. coli

Food Safety Commission for the Minister of Health, Food Related to setting standards for raw consumption of meat hygiene Law Food and health impact assessment requested (08 July 2011)

Eaten raw meat (beef) in Food and Health Impact Assessment (August 23) Overview

How enterohemorrhagic E. coli Develop when ingested?

The probability of developing one in the lower fungus is not zero.

Number of bacteria ingested in food poisoning cases of enterohemorrhagic E. coli

The probability of occurrence in enterohemorrhagic E. coli and Salmonella are similar

FAO/WHO Risk assessment

Dose (Bacterial count) Probability of occurrence of salmonellosis

Salmonella cases?

- Cases have been found in a number of bacteria ingested salmonella food poisoning cases, the lowest number of bacteria (about four).
  - Cause Food: Chocolate
  - Probability of occurrence in enterohemorrhagic E. coli and Salmonella are similar

FAO/WHO Risk assessment

Dose (Bacterial count) Probability of occurrence of salmonellosis

Beef Food situation

<table>
<thead>
<tr>
<th>Cause Food</th>
<th>Number of contaminant</th>
<th>Estimated food intake</th>
<th>Ingestion of bacteria/People</th>
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</thead>
<tbody>
<tr>
<td>Seaweed sauce</td>
<td>0.05~0.24cfu/100g</td>
<td>50cfu</td>
<td>1/208</td>
</tr>
<tr>
<td>Raw beef liver</td>
<td>0.04~0.18cfu/1g</td>
<td>50cfu</td>
<td>1/208</td>
</tr>
</tbody>
</table>

Beef Food situation

Beef Food situation

About eating meat

- 60% of high food trends in the home
- Food frequency “1-3 times a month,” about 40%
- “Once or twice a week” for about 30%

For eating raw meat

- Internet availability of food and cattle organ meat roast beef shop
- Survey results on cattle organ meat eating (Food Safety Commission in 2006)
- Times per year: 0-144 times (Average 5.7 times).
- Often eat raw beef

Survey Results

(Food Safety Technical Assessment, 2010)

- “Once or twice a week” for about 30%
- “Once or twice a week” for about 30%
- Often eat raw beef

Standards for meat for raw consumption

(heating measures) Summary

Distribution of beef

How do you approach

- “The number of target cells when processing microbial contamination” (PO) to determine
- 1 / 10 the number of target bacteria in microbial contamination when eating

Goals: Currently the number of patients with food poisoning (about 190) 0 people want to

Evaluation of food has not been pasteurized “raw” part.

Features of this risk assessment

Features of this risk assessment

- FSO and PO set at the level of severity, microbiological standards
- Processing standards, but it does not actually heat the edible portion is not
  →Reduction of pathogenic microorganisms simply obtained by heat treatment,
  can not directly estimate the risk reduction
- Realistically microbiological confirmation is not possible level
  →Instead of indicator bacteria found in the presence of heat, microbiological
  testing to ensure that they meet at the PO
- "Microorganism standard" and "process standards" set of management

Food and Health Impact Assessment Summary

- The goal of microbial contamination of bacteria during eating, as seen from
  the lowest incidence bacteria count of food poisoning so far is on the safe side
- "The goal of bacteria of microbial contamination during processing" to
  "target bacteria number of microbial contamination when eating" to 1 / 10 of
  proper hygiene in the anticipation of substantial safety
- Reproductive parts, parts that are not directly heated "process standards"/only "number of target bacteria in microbial contamination during processing," not secured.
  There must also be examined by a number of samples required microbial
- When setting up a system of heat processing step is essential to ensure
  the validity of the system

"Standards process" only "number of target bacteria in microbial contamination during processing," not secured.
There must also be microbial examined by a number of samples required

"The number of target bacteria in microbial contamination during processing (PO) confirmation has been achieved
Number of samples is required?

Thank you for your attention.