

# Microbiological criteria and good hygienic practices (GHP) for fermented bean curd

Trade Consultation Forum  
25 March 2015

# Purpose

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- To provide Members with information regarding the microbiological criteria and good hygienic practices (GHP) for fermented bean curd

# Microbiological safety of fermented bean curd

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- Recently, CFS found four fermented bean curd samples from the targeted food surveillance project on *Bacillus cereus* in ready-to-eat food containing excessive *B. cereus*
- Macao authorities also found two batches of fermented preserved bean curd contaminated with *B. cereus*

# *B. cereus* in fermented bean curd

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- *B. cereus* is ubiquitous in the environment and may exist in fermented bean curd
- Unhygienic food processing during the long fermentation process and improper storage may allow *B. cereus* to grow

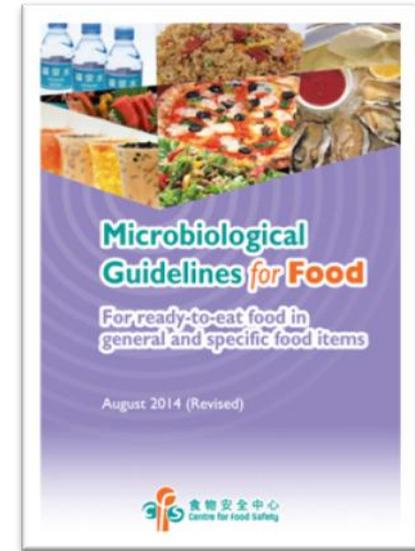
# *B. cereus* food poisoning

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- The number of organisms most often associated with human illness is  $10^5$  to  $10^8$
- Consuming food contaminated with excessive *B. cereus* may cause gastrointestinal upset such as vomiting and diarrhoea

# Microbiological Guidelines for Food

- Become effective in August 2014
- During its development, the local trade was consulted
- Endorsed by the Expert Committee on Food Safety and submitted to the World Trade Organization for notification



# Microbiological Guidelines for Food – fermented bean curd

- Ready-to-eat food: Food intended by the producer or the manufacturer for direct human consumption without the need for cooking or other processing effective to eliminate or reduce to an acceptable level the microorganisms of concern
- **Fermented bean curd is considered as a ready-to-eat food**



Criterion	Result (colony-forming unit (cfu)/g unless otherwise specified)		
	Satisfactory	Borderline	Unsatisfactory: potentially injurious to health and/or unfit for human consumption
<i>Campylobacter</i> spp. (thermotolerant)	n.d. in 25g	N/A	Detected in 25g
<i>Escherichia coli</i> O157 (and *other Shiga toxin-producing <i>E. coli</i> (STEC))	n.d. in 25g	N/A	Detected in 25g
<i>Salmonella</i> spp.	n.d. in 25g	N/A	Detected in 25g
<i>Vibrio cholerae</i> (O1 and O139)	n.d. in 25g	N/A	Detected in 25g
<i>Shigella</i> spp. <sup>a</sup>	n.d. in 25g	N/A	Detected in 25g
<i>Listeria monocytogenes</i>			
<ul style="list-style-type: none"> <li>For refrigerated food <sup>b</sup> (excluding frozen food) or food intended for infants</li> </ul>	n.d. in 25g <sup>c</sup>	N/A	Detected in 25g <sup>c</sup>
<ul style="list-style-type: none"> <li>For other ready-to-eat food</li> </ul>	< 10 <sup>d</sup>	10 - ≤ 100 <sup>d</sup>	> 100 <sup>d</sup>
<i>Vibrio parahaemolyticus</i>	< 20	20 - ≤ 10 <sup>3</sup>	> 10 <sup>3</sup>
<i>Staphylococcus aureus</i> and other coagulase-positive staphylococci	< 20	20 - ≤ 10 <sup>4</sup>	> 10 <sup>4</sup>
<i>Clostridium perfringens</i>	< 10	10 - < 10 <sup>4</sup>	> 10 <sup>4</sup>
<i>Bacillus cereus</i>	< 10 <sup>3</sup>	10 <sup>3</sup> - ≤ 10 <sup>5</sup>	> 10 <sup>5</sup>

# Regulatory standard for *B. cereus* in fermented bean curd (I)

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- **Codex:** has not established *B. cereus* criteria for fermented bean curd
- **HK:** make reference to the “Guidelines for Assessing the Microbiological Safety of Ready-to-eat Foods Placed on the Market” published by the Health Protection Agency in the UK
- **Taiwan:** maximum permitted level of *B. cereus* in food (including fermented bean curd) is 100MPN/g
- **Singapore:** no article of food which is ready for human consumption (including fermented bean curd) shall be contaminated with any pathogenic micro-organism

# Regulatory standard for *B. cereus* in fermented bean curd (II)

- **Mainland China:** no *B. cereus* criteria for fermented bean curd stipulated under 食品安全國家標準 《食品中致病菌限量》 (GB 29921-2013) and 《發酵性豆製品衛生標準》 (GB 2712-2003); AQSIQ has confirmed that fermented bean curd exported to HK should fulfil the local *B. cereus* criteria i.e. no more than  $10^5$  cfu/g

# Advice to Trade

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- Adopt Good Hygienic Practices (GHP) to ensure the safety and suitability of food at all stages of the food chain-
  - microbiological safety of the ingredients and culture
  - cleanliness of food contact surfaces and the environment
  - control of production conditions
  - prevention of cross contamination
  - maintaining good personal hygiene etc.
- Obtain fermented bean curd from reliable suppliers

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