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#14-01 Singapore 608550

RESPONSES TO COMMENTS RECEIVED FROM THE PUBLIC CONSULTATION ON DRAFT FOOD (AMENDMENT NO. Y) REGULATIONS 2023

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The Singapore Food Agency (SFA) initiated a public consultation on the draft Food (Amendment No. Y) Regulations 2023 concerning the proposed microbiological standards for non-ready-to-eat (non-RTE) food from 17 February 2023 to 18 April 2023. Concurrently, trading partners and interested parties were notified via World Trade Organization (WTO) SPS notification G/SPS/N/SGP/82 during the same period.

At the close of the public consultation exercise and WTO notification period, SFA received comments from seven respondents. SFA's responses are tabulated in **Table 1**.

SFA appreciates the time taken by stakeholders to submit feedback and comments which would contribute to the decision-making process. The amendments are targeted to come into effect in the first quarter of 2024. We would like to encourage all parties to actively participate in future consultations.

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TABLE 1

A.	**Comments on standards for *Salmonella* spp. in meat and meat products**	**SFA's response**
1.	Three respondents sought clarification on the need for zero-tolerance against *Salmonella* Enteritidis, *Salmonella* Typhi, *Salmonella* Paratyphi A and *Salmonella* Paratyphi B in raw, partially cooked meat and meat products that will be subject to further preparation / processing (for e.g. by consumers or food businesses) to ensure safety.	The existing *Salmonella* standards for non-RTE meat and meat products are zero-tolerance for *Salmonella* Enteritidis as it is the top serotype associated with human clinical cases of Salmonellosis worldwide, while zero tolerance against the typhoidal serotypes is due to severity of the disease caused. In recent years, *Salmonella* spp. in raw poultry is frequently implicated in foodborne outbreaks globally. As Singapore is heavily reliant on imported food the non-RTE microbiological standards allow us to verify the safety of these imports.
2.	One of the three respondents sought clarification if there was inconsistency in the proposed draft regulation for *Salmonella* spp., where 'm' and 'M' limit are both 'Not detected in 25g'.	For most of the pathogens in the non-RTE product categories which are classified as "serious" or "severe" hazards by the International Commission on Microbiological Specifications for Foods (ICMSF), the attribute assessed is based on the presence or absence of the pathogens in a defined quantity of the sample (i.e., m/M = Not detected in 25 g). The proposed draft regulation for *Salmonella* spp. is therefore in line with ICMSF's recommendations, as well as the microbiological standards adopted by the major developed countries.

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<table>
<tr><td>3. One respondent sought clarification on whether the criteria for Salmonella spp. for small consignments of meat and meat product (item 2 of Table 3 in Part 3 of the Eleventh Schedule) should be c=1 or c=0.</td><td>SFA has taken note of the typographical error in item 2 of Table 3 in Part 3 of the Eleventh Schedule regarding the limit for “c” in the case of a small consignment, and would like to clarify that for small consignment, where n=1, c will be 0. SFA will correct the error in the legal text.
<table>
<tr><th>Pathogen</th><th>n</th><th>c</th><th>m</th><th>M</th></tr>
<tr><td>Salmonella spp. (except for Salmonella Enteritidis, Salmonella Typhi, Salmonella Paratyphi A and Salmonella Paratyphi B)</td><td>5 (except for a small consignment, one)</td><td>1(except for a small consignment, 0)</td><td>Not detected in 25 g</td><td>Not detected in 25 g</td></tr>
</table></td></tr>
<tr><td>B. Comments on standards for Salmonella spp. in raw poultry egg and other raw egg products</td><td>SFA’s response</td></tr>
<tr><td>4. One respondent requested for SFA to remove the parameters for Salmonella Enteritidis in raw poultry eggs and other raw egg products from the Eleventh Schedule since the eggs will be further prepared by consumers before consumption.</td><td>The standard for Salmonella Enteritidis in raw poultry shell eggs and other raw egg products was proposed to protect the safety of our local population, considering the unique consumption pattern of this group of food products in Singapore, where undercooked eggs (known as “soft-boiled eggs”) are a popular item especially for breakfast. Raw poultry shell eggs may also be used directly by consumers to incorporate into ready-to-eat food. (e.g., pasteurized eggs products in mayonnaise and egg-based desserts).</td></tr>
<tr><td>C. Comments on the Standard for Listeria monocytogenes</td><td>SFA’s response</td></tr>
</table>

5. One respondent questioned the need to set a standard for *Listeria monocytogenes* in non-RTE pasteurized egg and egg products. The respondent suggested that the product types for which testing of *L. monocytogenes* may not be useful as highlighted in the Codex Guidelines on the Application of General Principles of Food Hygiene to the Control of *Listeria monocytogenes* in Foods (CAC/GL 61-2007) should also be applied to such non-RTE pasteurized egg products.	SFA included *Listeria monocytogenes* as it has been demonstrated to have the ability to grow in refrigerated liquid pasteurized egg products as a result of insufficient pasteurization or recontamination due to poor handling, which is a cause for concern as such products may be used directly by consumers. (e.g., in mayonnaise, egg-based desserts like cream, tiramisu etc.) Food businesses need not subject their product to testing if they satisfy Codex's "microbiological criteria for *L. monocytogenes* in Ready-To-Eat foods in which growth of *L. monocytogenes* will not occur with pH <4.4 and would have a limit of 100 cfu/g" (CAC/GL 61-2007). It is a business decision on the part of the importers to implement pre-export testing.
D. Comments on the Standard for *Vibrio cholerae* in blood cockles and non-RTE oysters	**SFA's response**

6. One respondent commented that the limit for *Vibrio cholerae* should be set only for pathogenic strains of *V. cholerae* that cause cholera, and not for all strains belonging to *V. cholerae*.	*Vibrio cholerae* is indigenous to fresh and brackish water environments in tropical, subtropical, and temperate areas worldwide. Over 200 O serogroups have been established for *V. cholerae*. Strains belonging to O1 and O139 serotypes generally possess the *ctx* gene and produce cholera toxin (CT) that are responsible for epidemic cholera. Non-O1 and O139 strains can also cause foodborne diarrhea, albeit milder than cholera.
7. In lieu of the standard for *V. cholerae*, another respondent urged SFA to consider guidelines to ensure the safe and sanitary control of the growing, processing and shipping of shellfish for human consumption.	Singapore is heavily reliant on imported food coming from many countries across the world. In addition, due to the popularity of raw/undercooked oysters and blood cockles in local cuisine, and their frequent association with gastrointestinal cases locally and globally, SFA will apply the standard for all strains belonging to *V. cholerae.* We encourage industry to refer to Codex Alimentarius' Code of Practice for Fish and Fishery Products (CAC/RCP 52-2003) for best practices from primary production to retail.
E. Comments on the definition of "non-intact" beef product	**SFA's response**

8. One respondent commented on the proposed definition for "non-intact" beef product[a], noting that in practice, any form of beef could be prepared or processed at a future step to be non-intact. The respondent was of the view that it may be clearer if the words "*or will be*" were removed from the definition. [a] *"Non-intact", for a beef product, means a beef product that has been, or will be, subject to a process (for example, injection with a solution, mechanical tenderisation or comminution) that allows pathogens to penetrate below the beef product's exterior surface into the beef product's interior.*	SFA has carefully considered the comment and agrees with the respondent that the words "*or will be*" can be removed from the definition without affecting the intended meaning of the term "non-intact". SFA will make the changes to the legal text.
F. Comments on sampling and testing requirements	
9. One respondent sought clarification on the laboratory methods that would be utilized for testing and who would bear the costs related to testing. The respondent opined that microbiological testing may imposed significant financial burden as well as negatively impact the shelf life of highly perishable products.	The proposed microbiological standards will apply to regulatory samples collected by SFA from local food establishments as well as imported consignments. The cost of testing will be borne by SFA as part of our regulatory surveillance programme. The samples will be tested at Singapore's national food safety laboratory and accredited laboratories under SFA's Laboratory Recognition Programme (LRP), using accredited test methods. SFA is mindful of the shelf life of highly perishable products, and our surveillance programme is structured to facilitate the clearance of such products. For example, products with short shelf lives are usually not detained after sampling, or if there is a need to detain such products based on past poor compliance records, samples from such products are prioritized for testing.

10. The same respondent sought clarification on the sampling procedure for (i.e., collection of five 25-gram samples for STEC[b] in meat and meat products) and commented that when the level of the pathogen is very low, the sample itself could dilute the pathogen beyond the level of detection in larger sample sizes. [b] *STEC or Shiga-toxin producing Escherichia coli (O26, O45, O103, O111, O121, O145)*	SFA has proposed to standardize the number of sampling units to n=5, which is the minimum sampling size for most pathogens recommended by ICMSF (ICMSF, 2018). This is also aligned with the microbiological standards adopted by the major developed countries. The test method for STEC follows AOAC PT 091301, which is an accredited test method. In accordance with the test method, a 25-gram portion of sample will be analyzed. In addition, SFA notes that other countries such as Canada and Korea have also stipulated a limit of "not detected in 25 g" for their STEC standards.
11. Two respondents also enquired whether there was a need to perform pre-export testing on the different *Salmonella* serotypes in meat and meat products.	SFA typically does not require exporting countries to do pre-export tests, or to include testing of specific serotypes of *Salmonella* as part of their monitoring programme, unless specified. However, food businesses can implement their own monitoring programme based on the risk mitigation measures taken as part of the production process (e.g., heat-treated kill step).
12. One respondent enquired on the list of laboratories that could support testing for emerging pathogens.	Under SFA's Laboratory Recognition Programme (LRP), there are recognized laboratories that can support testing of new pathogens. Food businesses can refer to the SFA website for the full list of LRP laboratories.
G. Other General comments	**SFA's response**

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13. Two respondents sought clarification on whether the new microbiological standards for non-RTE food will replace the current ones which can be found on SFA's website. 14. One of the two respondents further enquired if the new microbiological standards for non-RTE food will affect the import inspection requirements.	SFA currently adopts a set of microbiological standards for non-RTE meat and meat products which can be found on the SFA website. Once the new microbiological standards come into effect (target March 2024), SFA's import inspection and testing of non-RTE food imported into Singapore will follow the new standard (i.e., consignments will be passed/rejected based on the new standards).
15. Two respondents sought clarification on whether the new microbiological standards for non-RTE food would be applied to processed meat and fish products such as frozen gyoza, sausages, marinated meat and fish balls.	The microbiological standards for non-RTE food apply to meat and meat product as defined under the Sale of Food Act[c]. The standards would apply to processed meat products such as frozen gyoza, sausages and marinated meat. These standards do not apply to fish and fish products, unless there is a meat component in the fish product, as in the case of "Fuzhou" fish balls (which contain a minced meat filling) [c] *Definition of "meat" and "meat products" under the Sale of Food Act* *"meat" includes any part of slaughtered poultry, bovine animal, ovine animal, caprine animal, porcine animal, game or other animal, that is intended for human consumption;* *"meat product" means any of the following intended for human consumption:* *(a) offal or other part of a carcase;* *(b) any product derived from processing or preserving meat;* *(c) any product containing meat;*

16. One respondent requested that SFA include standards for *Campylobacter* as this group of bacteria was indicated as the second most frequently reported cause of foodborne illness in the United States.	The incidence rate of Campylobacteriosis in Singapore is lower than most developed countries and the severity of disease is mild. Therefore, based on SFA's risk matrix, we have assessed that no limits for *Campylobacter* are required at the present time. Nevertheless, SFA will continue monitoring this bacterium and make appropriate adjustments based on the latest scientific evidence.