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Panel on Food Safety and Environmental Hygiene

**Updated background brief prepared by the Legislative Council Secretariat
for the meeting on 9 January 2018**

Proposed amendments to the Food Adulteration (Metallic Contamination) Regulations

Purpose

This paper provides background information on the Administration's proposal to amend the Food Adulteration (Metallic Contamination) Regulations (Cap. 132V) ("the Regulations"), and summarizes the views and concerns of members of the Panel on Food Safety and Environmental Hygiene ("the Panel") on the subject.

Background

2. According to the Administration, metals are naturally present and ubiquitous in the environment. Metallic contaminants may enter the food supply chain through environmental contamination or during food production process. They may be present in food in trace amount. For ordinary adults, diet is one of the important sources of exposure to metallic contaminants. Adverse health effects posed by metallic contaminants in food depend on the chemical nature as well as the amount and duration of individual exposure, etc.

Existing regulatory control on levels of metallic contamination in food

3. At present, metallic contamination in food in Hong Kong is regulated by the Public Health and Municipal Services Ordinance (Cap. 132) ("PHMSO") and the Regulations:

- (a) section 54 of PHMSO stipulates that all food for sale must be fit for human consumption;
- (b) Regulation 3 of the Regulations prohibits the import, consignment, delivery, manufacture or sale of any food for human consumption containing any metal in such amount as to be dangerous or prejudicial to health; and
- (c) the First and Second Schedules to the Regulations prescribe 19 maximum permitted concentrations of seven metallic contaminants in food, namely, antimony, arsenic, cadmium, chromium, lead, mercury and tin, among which the corresponding food categories of four metallic contaminants (i.e. arsenic, lead, mercury and tin) cover "all food in solid/liquid form".

4. The Regulations were enacted in 1960, with the latest major amendments to the First and Second Schedules to the Regulations made in 1983. Having regard to international developments over the years, including revision of the international food safety standards by the Codex Alimentarius Commission ("Codex") and other jurisdictions as well as their experience in implementing the revised standards, the Administration considers it necessary to enhance and update the Regulations with a view to better protecting public health, facilitating effective regulation and promoting harmonization between local and international standards.

Proposed amendments to the Regulations

5. Following a comprehensive review of the Regulations, in consultation with the Working Group on Amendments to Food Adulteration (Metallic Contamination) Regulations, the Expert Committee on Food Safety and the Advisory Council on Food and Environmental Hygiene, the Administration proposes to amend the Regulations as follows:

- (a) to replace the existing food categories of "all food in solid/liquid form" with specific maximum levels ("MLs")¹ targeting individual food/food groups, with a view to aligning with the Codex principle and modern international regulatory trends of specifying metallic contamination standards for individual food/food groups of significant dietary exposure;

¹ "Maximum permitted concentrations" under the Regulations are known as "maximum levels" (MLs) under Codex. The term ML has been used in the proposed amendments so as to align with the Codex terminology.

- (b) to adopt all Codex MLs on metallic contaminants, except for seven Codex MLs including ML for cadmium in "rice, polished" and the guideline level for methylmercury in predatory fish;
- (c) to establish MLs for food/food groups which are of significance to the population in Hong Kong and for which there is no relevant Codex ML. Factors including the local dietary practice, the local risk assessment results, relevant standards of other jurisdictions, recent food incidents in Hong Kong and other jurisdictions as well as the Codex principle that contaminant levels in food shall be "as low as reasonably achievable" have been taken into account when setting the proposed MLs; and
- (d) to update the food descriptions and nomenclatures in the Regulations and to incorporate interpretation of MLs into the Regulations², so as to bring the Regulations into alignment with international practice.

6. Under the proposed amendments to the Regulations, the total number of metallic contaminants covered will increase from seven to 14; and the total number of MLs of metallic contaminants will increase from 19 to 145, of which 90 are more stringent than the existing maximum permitted concentrations.

Members' views and concerns

7. Major views and concerns expressed by Panel members on the Administration's proposed amendments to the Regulations are summarized below.

Proposed regulatory standards for metallic contaminants

8. Members in general supported the Administration's proposals to enhance and update the Regulations, with a view to aligning with the Codex principle and modern international regulatory trends of specifying metallic contamination standards for individual food/food groups of significant dietary exposure. Some members considered that sufficient evidence and scientific justifications should be provided for adoption of standards different from Codex's corresponding MLs. They hoped that the Administration, when setting MLs

² There is currently no interpretation in the Regulations on how the maximum permitted concentrations can be applied to food in a dried, dehydrated or concentrated form as well as multi-ingredient products.

for food, would strike a reasonable balance between safeguarding public health and avoiding undue regulation and would fully consult the trade before finalizing the legislative proposals.

9. According to the Administration, one of the objectives of implementing the proposed amendments was to promote harmonization between local and international standards. The Administration thus proposed to adopt Codex MLs unless there were strong scientific justifications to adopt a different standard. When setting the proposed MLs for individual food/food groups with no relevant Codex MLs, the Administration had taken into account factors including the local dietary practice, the risk assessment results of the Centre for Food Safety ("CFS"), recent food incidents in Hong Kong and other jurisdictions as well as the Codex principle that contaminant levels in food should be "as low as reasonably achievable". The Administration indicated that it would launch a public consultation exercise in the third quarter of 2017 and would take into account the views received before finalizing the legislative proposals and introducing the Amendment Regulations into the Legislative Council for scrutiny.

Proposed maximum levels for cadmium in polished rice and leafy vegetables

10. Many members expressed concern about the proposed revision to ML for cadmium in polished rice from 0.1 mg/kg to 0.2 mg/kg, which in their view suggested a relaxation of standards that might be dangerous or prejudicial to public health. Some members considered it more appropriate to retain the existing ML for cadmium in polished rice for better protection of public health, taking into account local food consumption pattern and the dietary habit of the Hong Kong population. Worrying that rice products which failed to comply with the existing standard under the Regulations would be able to enter the local market in the future, some members objected to the proposed revision to ML for cadmium in polished rice. Some other members, however, considered the existing ML for cadmium in polished rice too stringent. They were concerned about the likely impact on the supply of rice if Hong Kong's standard for cadmium in polished rice was not revised to align with those adopted by major rice exporting countries.

11. According to the Administration, Codex had established an ML of 0.4 mg/kg for cadmium in polished rice. Having regard to the dietary habit of the Hong Kong population and the relevant standards adopted by various jurisdictions (i.e. the European Union, Korea, the Mainland and Singapore had adopted MLs of 0.2 mg/kg for cadmium in polished rice), a proposed ML for cadmium in polished rice at 0.2 mg/kg, which was more stringent than Codex, was considered justified to protect public health in Hong Kong. It should be

noted that in addition to the proposed revision to ML for cadmium, the Administration had proposed to amend the standards for other metallic contaminants, including arsenic, lead and mercury, in polished rice. Rice products failing to meet the relevant standards would not be allowed to enter the local market.

12. The Administration further advised that under the relevant requirements of the World Health Organization, member countries had to provide strong scientific justifications for adopting a standard different from the one recommended by Codex, even though the standard proposed had been adopted in the local market for decades. According to the Codex principles for establishing MLs in food, MLs should be set in such a way that the consumers were adequately protected. At the same time, other legitimate factors (e.g. promotion of fair practices in food trade) needed to be considered. Besides, MLs should be based on scientific principles leading to standards which were designed to assure the quality and safety of food, so that there was no unjustified barrier to international trade. Should the Hong Kong Government continue to adopt 0.1 mg/kg as ML for cadmium in polished rice without strong scientific justifications, it might face the challenges from those countries supplying rice to Hong Kong.

13. Pointing out that some Mainland vegetables were found to have contained excessive levels of metallic contaminants such as cadmium and lead, some members opposed to the proposed relaxation of ML for cadmium in leafy vegetables from 0.1 mg/kg to 0.2 mg/kg. The Administration advised that as risk assessments conducted in the past by CFS had indicated that revision of the standard would not pose higher health risk, the Administration considered it appropriate to bring ML for cadmium in leafy vegetables in line with the corresponding Codex standard. According to results of food samples tested under CFS' food surveillance programme, only a few vegetable samples imported from the Mainland contained metallic contaminants exceeding the existing statutory limits.

Proposed maximum levels for methylmercury in fish

14. Some members enquired about the rationale for adopting an ML of 0.5 mg/kg for methylmercury in fish (including predatory fish such as large tuna) to replace the existing ML of 0.5 mg/kg for total mercury in fish, which was more stringent than the standard of 1 mg/kg for predatory fish adopted by Codex and other countries such as the United States of America. The Administration explained that there was no relevant Codex ML for total

mercury in fish but Codex had established guideline levels ("GLs")³ for methylmercury in fish (other than predatory fish) and predatory fish at 0.5 mg/kg and 1 mg/kg respectively. Factors including consumption pattern/amount of the food concerned, toxicity of the relevant metallic contaminants and effects on vulnerable groups in the Hong Kong population had been considered, in proposing an ML of 0.5 mg/kg for methylmercury in fish.

15. Concern was raised that the proposed MLs for mercury in fish and aquatic animals were respectively expressed in methylmercury and total mercury. In some members' view, to afford better protection to public health, the Administration should consider setting MLs for both methylmercury and total mercury in food, covering fish and aquatic animals. The Administration responded that while methylmercury was the major form of mercury in fish, different forms of mercury were found in other food items including aquatic animals. The Administration considered it appropriate to follow the Codex standards when setting MLs expressed in methylmercury for fish and total mercury for other types of food.

Implications on food supply

16. Some members noted with concern that a significant number of MLs proposed were more stringent than the existing maximum permitted concentrations under the Regulations. An enquiry was raised as to whether the enhancement would have an adverse impact on the supply and prices of food in Hong Kong. The Administration advised that according to the results of CFS' routine food surveillance programme and additional studies conducted in the past, the levels of metallic contamination in food in the local market could generally comply with the proposed MLs. Even though most of the proposed MLs were more stringent than before, the Administration expected that they would have minimal impact on the supply of food in Hong Kong.

Food surveillance and testing capability

17. Given the substantive updates proposed to be made to the Regulations in respect of the types and standards of metallic contaminants in food, concerns were raised as to whether there were adequate laboratory testing facilities in Hong Kong and whether additional resources should be allocated to enhance CFS' food safety control work, in particular in the area of food surveillance.

³ According to the General Standard for Contaminants and Toxins in Food and Feed published by Codex, GL is the maximum level of a substance in a food commodity which is recommended by Codex to be acceptable for commodities moving in international trade. When GL is exceeded, governments are advised to decide whether and under what circumstances the food should be distributed within their territory or jurisdiction.

18. According to the Administration, CFS had discussed with the local private testing and laboratory sector its capacity on testing metallic contaminants in food as proposed in the amendments to the Regulations. The local private testing and laboratory sector's initial feedback was that it would be capable of providing testing services for the metallic contaminants as proposed, provided that the sector was given sufficient time in advance to gear up for making available such testing services. The Administration would consider giving a reasonable grace period for the relevant Amendment Regulations to come into effect, so that the trade and the private testing and laboratory sector would have reasonable time to get prepared for the updated standards. Since the number of food groups of the proposed MLs would be increased, the types of samples to be collected under CFS' food surveillance programme might be adjusted accordingly. CFS would ensure that sufficient manpower resources would be deployed for conducting routine food surveillance through the established mechanism.

Latest developments

19. The Administration conducted a public consultation exercise on the proposed amendments to the Regulations between 6 June and 5 September 2017. The Administration will report to the Panel on the results of the consultation at the meeting on 9 January 2018.

Relevant papers

20. A list of relevant papers on the Legislative Council website is in the **Appendix**.

Appendix

Relevant papers on the proposed amendments to the Food Adulteration (Metallic Contamination) Regulations

Committee	Date of meeting	Paper
Panel on Food Safety and Environmental Hygiene	13.6.2017 (Item IV)	<u>Agenda</u> <u>Minutes</u>
	3.7.2017 (Item I)	<u>Agenda</u> <u>Minutes</u>

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