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Subcommittee on Food Adulteration
(Metallic Contamination) (Amendment) Regulation 2018

Background brief prepared by the Legislative Council Secretariat

Purpose

This paper provides background information on the Food Adulteration (Metallic Contamination) (Amendment) Regulation 2018 ("the Amendment Regulation"), and gives a brief account of the relevant discussion held by the Panel on Food Safety and Environmental Hygiene ("the Panel").

Background

2. At present, the Food Adulteration (Metallic Contamination) Regulations (Cap. 132V) ("the Regulations"), enacted in 1960, regulate the levels of metallic contamination in food in the following way:

(a) Regulation 3(1) of the Regulations prohibits the import, consignment, delivery, manufacture or sale, for human consumption, of any food containing any metal in greater concentration than as prescribed in the First or Second Schedule to the Regulations, or in such amount as to be dangerous or prejudicial to health; and

(b) the First and Second Schedules to the Regulations stipulate 19 maximum permitted concentrations ("MPCs") of seven metallic contaminants, namely arsenic, antimony, cadmium, chromium, lead, mercury and tin, in food.

3. According to the Legislative Council ("LegCo") Brief (File Ref.: FHB/F/5/1/8/2) issued by the Food and Health Bureau ("FHB") in June 2018, the Government has all along been making reference to the then standards of

the Codex Alimentarius Commission ("Codex") and those of other economies, as well as the then available data on the metallic concentrations in various foodstuffs, when reviewing the Regulations. Over the years, Codex has revised its standards on metallic contamination in food in view of the advancement of science and the outcome of risk assessment; and various other economies have also revised their standards on metallic contamination, taking into account the evolving Codex standards, the occurrence data of metallic contamination in foods, the food consumption patterns/dietary practices of their own economies etc.

4. FHB and the Centre for Food Safety ("CFS") have conducted a comprehensive review of the Regulations, taking into account Codex's latest standards on metallic contamination, relevant standards of other economies, local food consumption pattern/dietary practices and the results of CFS' risk assessment. With a view to better protecting public health, facilitating effective regulation and aligning Hong Kong's standards with international standards, the Administration proposes to update the Regulations.

The Amendment Regulation

5. On 8 June 2018, the Administration published in the Gazette the Amendment Regulation (L.N. 113 of 2018). The Amendment Regulation is made by the Secretary for Food and Health under section 55 of the Public Health and Municipal Services Ordinance (Cap. 132) to amend the Regulations along the following principles:

(a) to replace the existing food categories of "all food in solid form" and "all food in 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;

(b) to adopt Codex MLs unless otherwise justified;

(c) to establish MLs for food/food groups which are of significance to the population in Hong Kong and for which there are no relevant Codex MLs;

[1] The term ML is adopted by Codex and is of the same meaning as the term MPC. The term ML will be used in the Amendment Regulation in order to align with Codex's terminology.

(d) to update the food descriptions and nomenclatures in the Regulations, with reference to the available Codex's food descriptions and nomenclatures or those of other economies as appropriate; and

(e) to incorporate interpretation of MLs into the Regulations, given that there is currently no interpretation in the Regulations on how MPCs can be applied to food in a dried, dehydrated or concentrated form, as well as multi-ingredient products (i.e. compounded food).

6. Under the Amendment Regulation, the total number of metallic contaminants covered will increase from seven to 14 (the seven additional metallic contaminants are barium, boron, copper, manganese, nickel, selenium and uranium); and the total number of MLs of metallic contaminants will increase from 19 to 144. Among the 144 MLs, 89 are more stringent than the existing MPCs, six are less stringent than the existing MPCs[2], and the rest are either the same as the existing MPCs or are newly established standards.

7. The Amendment Regulation was tabled before LegCo at its meeting of 13 June 2018 and is subject to the negative vetting procedure. It will take effect for certain types of fresh foods (i.e. fresh fruits and vegetables and their juice, fresh meat and edible offal of animals and poultry, aquatic animals and poultry eggs) on 1 November 2019 first, given the shorter durability and shelf life of those types of food. Given that food types other than those mentioned above normally have a longer shelf/storage life, the Amendment Regulation will take effect for them on 1 November 2020.

Relevant discussion held by the Panel

8. The Panel was consulted on the legislative proposal at the meetings on 13 June and 3 July 2017, and was briefed on 9 January 2018 on the outcome of the public consultation exercise conducted by the Administration. Members' major views and concerns are summarized in the ensuing paragraphs.

Proposed MLs for metallic contaminants in food

9. Members in general supported the Administration's proposal to enhance and update the Regulations. Some members considered that sufficient

[2] Among those six MLs, four are brought in line with the corresponding Codex MLs (i.e. cadmium in leafy vegetables and wheat, mercury (methylmercury) in fish, and tin in canned food), one is more stringent than the corresponding Codex ML (i.e. cadmium in polished rice), and one (i.e. cadmium in husked rice) is brought in line with the proposed ML for cadmium in polished rice.

evidence and scientific justifications should be provided for adoption of standards different from the corresponding Codex MLs. They hoped that the Administration, when setting MLs for food, would strike a reasonable balance between safeguarding public health and avoiding undue regulation.

10. 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, results of CFS' risk assessments, recent food incidents in Hong Kong and other economies as well as the Codex principle that contaminant levels in food should be "as low as reasonably achievable".

MLs for cadmium in polished rice and leafy vegetables

11. Many members were deeply concerned that the proposed relaxation of ML for cadmium in polished rice from 0.1 mg/kg to 0.2 mg/kg might expose the general population to a higher health risk. Some members considered it more appropriate to retain the existing MPC 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 MPC for cadmium in polished rice too stringent. Concern was raised 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.

12. According to the Administration, Codex had established an ML of 0.4 mg/kg for cadmium in polished rice. Among the countries/economies that had established MLs for cadmium in polished rice, only Australia and New Zealand had maintained an ML of 0.1 mg/kg and their standards were established before 1999. Countries/economies whose local people relied on polished rice as a major diet had adopted the Codex standard of 0.4 mg/kg (e.g. Japan, Taiwan and Vietnam) or a more stringent standard of 0.2 mg/kg as the Administration now proposed (e.g. the Mainland, Korea and Singapore), while some did not have an ML (e.g. Thailand). Results of CFS' risk assessment indicated that the proposed ML of 0.2 mg/kg, based on the local rice consumption, was adequate in protecting public health in Hong Kong.

13. The Administration further advised that under the Amendment Regulation, cadmium was only one of the six metallic contaminants with proposed MLs applicable to polished rice. The other five metallic contaminants were antimony, arsenic, chromium, lead and mercury. The Amendment Regulation would tighten the standards for arsenic, lead and mercury, relax the standard for cadmium, while maintaining the prevailing standards for antimony and chromium. The overall quality of rice would likely improve given that the rice would have to meet all of the six standards.

14. Query was raised about the justifications for relaxing the standard for cadmium in leafy vegetables from 0.1 mg/kg to 0.2 mg/kg while tightening the standard for cadmium in bulb vegetables, brassica vegetables and fruiting vegetables from 0.1 mg/kg to 0.05 mg/kg. The Administration advised that the proposed MLs for cadmium in different types of vegetables had made reference to the corresponding Codex standards. As the risk assessments conducted by CFS in the past indicated that revision of the standard for cadmium in leafy vegetables and other vegetables would not pose higher health risk to the local population, the Administration considered it appropriate to bring MLs for cadmium in leafy vegetables and other vegetables in line with the corresponding Codex standards.

MLs for methylmercury in fish

15. Concern was expressed over the Administration's proposal to adopt an ML of 0.5 mg/kg for methylmercury in fish (including predatory fish such as large tuna) to replace the existing MPC 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. According to the Administration, 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. Methylmercury was the major form of mercury in fish and was more toxic than inorganic mercury. As fish had been known as the major dietary source of methylmercury exposure in human, the Administration considered it inappropriate from a local public health perspective to strictly follow the relevant Codex GLs. As such, an ML of 0.5 mg/kg for methylmercury in fish, including predatory fish, was proposed.

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[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.

MLs for other food groups

16. Enquiries were raised as to whether consideration would be given to the suggestion from the Consumer Council by adopting a food group called "other foods"; and establishing MLs for metallic contaminants for "other foods" under which food items such as snack and sugar confectionery would be covered. The Administration advised that according to the Codex principle for establishing MLs in food, MLs should only be set for food in which the contaminant might be found in amounts that were significant for the total exposure of the consumer. In other words, it was not necessary to set MLs for each and every type of foods that contained a contaminant. For food/food groups without specific MLs, CFS would continue to make use of risk assessment as the safety net.

Impact on food supply

17. As a significant number of MLs proposed were more stringent than the existing MPCs 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.

Grace period

18. Some members considered the proposed grace period for non-fresh foods too long. There was a view that a grace period of 12-18 months for all food items would be more appropriate. The Administration explained that sufficient time had to be provided for the trade to adapt to the updated MLs and the local testing and laboratory sector to build up testing capacity based on the new MLs.

Relevant papers

19. A list of relevant papers on the LegCo website is in the **Appendix**.

Council Business Division 2
Legislative Council Secretariat
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Appendix

Relevant papers on Food Adulteration (Metallic Contamination) (Amendment) Regulation 2018

Committee	Date of meeting	Paper
Panel on Food Safety and Environmental Hygiene	13.6.2017 (Item IV)	Agenda Minutes Administration's follow-up paper (LC Paper No. CB(2)85/17-18(01))
	3.7.2017 (Item I)	Agenda Minutes Administration's follow-up paper (LC Paper No. CB(2)2046/16-17(01))
	9.1.2018 (Item IV)	Agenda Minutes Administration's follow-up paper (LC Paper No. CB(2)1052/17-18(01))

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