

**For Discussion
On 8 May 2007**

LegCo Panel on Food Safety and Environmental Hygiene

Regulation of the Level of Arsenic in Dried Food Products

PURPOSE

This paper briefs members on the regulation of arsenic in dried food products and the safety assessment process adopted by the Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department (FEHD).

BACKGROUND

2. To ensure food safety, the Administration has implemented a host of measures including the formulation of legislations regarding the standards and restrictions for the food concerned. One objective of food safety related legislation is to provide standards for the food trade to comply with, thereby ensuring the food produced is wholesome and fit for human consumption. With respect to heavy metals, as they may be found in food naturally due to environmental contamination, their presence in food does not necessarily imply abuse in the manufacturing process. Legally, the maximum permitted level of heavy metals (including arsenic) in various foods are stipulated in the Food Adulteration (Metallic Contamination) Regulations (the Regulations) of the Public Health and Municipal Services Ordinance. The CFS assesses whether the level of heavy metals in a food item has exceeded the limit as stipulated in the Regulations, and if so, whether the level of heavy metals in the food concerned will cause adverse health effects.

COMPLIANCE WITH THE REGULATIONS

3. As mentioned in paragraph 2, arsenic is an environmental pollutant and may exist in food naturally. In addition, if the food is in dried form, the CFS would need to make reference to international practice, take into consideration the degree of dehydration before determining whether the level of arsenic detected in the food sample has exceeded the legal limit. This is because the levels of arsenic would have been concentrated for dried

food products which have undergone a process of drying.

SAFETY ASSESSMENT

4. In determining whether the limits for arsenic in food as stipulated in the Regulations has been exceeded in the food sample and if enforcement actions should be taken, the CFS also assesses the overall safety of the sample and the associated health effects of the metals detected. The CFS will, for instance, take into account the level of the contaminant in the food, the quantity of the food consumed and the duration of consumption, since food samples found to have exceeded the legal limits for arsenic do not necessarily mean that their consumption would affect health. In this respect, we make reference to international safety standards such as the Provisional Tolerable Weekly Intake (PTWI) established by the Joint Food and Agriculture Organization (FAO) / World Health Organization (WHO) Expert Committee on Food Additives (JECFA)¹. The PTWI is an estimate of the amount of a contaminant that can be ingested per week over a lifetime without appreciable risk. It is noted that transient excursions above the PTWI would have no health consequences provided that the average long-term intake does not exceed the PTWI.

5. The CFS has all along attached great importance to the monitoring of heavy metals in food. We have conducted a risk assessment study on "Dietary Exposure to Heavy Metals of Secondary School Students" in 2002 and found that dietary exposure to arsenic fell well below the safety reference value established by JECFA. For dried squid, based on the past risk assessment study and the consumption pattern for dried squid, adverse health effects due to inorganic arsenic as a result of normal consumption of dried squid products are not expected.

6. The CFS also concerns about hazards in food which may be regularly consumed even though the levels of a contaminant detected therein are within the legal limits. For example, the CFS issued health advice to special high-risk groups, such as pregnant women and children, advising them to limit their intake of some big predatory fish like tuna, due to the relative higher levels of mercury in these specific types of fish, as well as the fact that fish is a main component of our diet.

¹ The Joint FAO/WHO Expert Committee on Food Additives (JECFA) is an international expert scientific committee that is administered jointly by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO). It has been meeting since 1956, initially to evaluate the safety of food additives. Its work now also includes the evaluation of contaminants, naturally occurring toxicants and residues of veterinary drugs in food.

WAY FORWARD

7. The CFS will continue to monitor the levels of heavy metals and other food hazards in food for protecting public health and promoting food safety in Hong Kong.

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