

**For Information
on 11 May 2010**

**Legislative Council Panel on
Food Safety and Environmental Hygiene**

The First Total Diet Study in Hong Kong

PURPOSE

This paper briefs Members on the progress of the first Total Diet Study (TDS) in Hong Kong conducted by the Centre for Food Safety (CFS).

BACKGROUND

2. TDS is recognised internationally as the most cost effective way to estimate the dietary exposures to food chemicals or nutrients for various population groups and to assess their associated health risks. It provides the scientific basis for assessing food safety risks and regulating food supply, and also helps risk managers focus their resources on the food chemicals or nutrients that pose the greatest risks to public health. Various countries, such as the United Kingdom, the United States of America, Canada, Australia, New Zealand and Mainland China, have conducted their own TDS and are regularly updating the results.

3. A TDS is a large and complex project with many components. Foods commonly consumed are purchased, and prepared as they would normally be consumed, i.e. table-ready, in a manner consistent with cultural habits, and then analysed for a range of substances. The analytical results on the concentration of substances in

food are combined with the food consumption data to obtain the dietary exposure. The dietary exposure estimated is then compared to the relevant safety reference values for the food chemical of concern or the nutritional reference values for the nutrient of concern.

THE FIRST TDS IN HONG KONG

4. In February 2007, CFS formed a Task Force on TDS, with representatives from the Department of Health and Government Laboratory (GL), to formulate the plan and monitor the progress of the first TDS in Hong Kong.

5. To build up our capacity for conducting a TDS, a four-day workshop, in collaboration with the World Health Organization (WHO), was held in December 2008. About 80 representatives from the Asia Pacific and South East Asia regions attended the workshop.

6. The first TDS in Hong Kong aims to estimate the dietary exposures of the Hong Kong population and various population sub-groups to a range of substances, including contaminants and nutrients, and thus assess any associated health risks.

7. The Expert Committee on Food Safety¹ has been consulted and supports CFS' plan to conduct the first TDS in Hong Kong.

¹ The Expert Committee on Food Safety is set up under CFS and is responsible for advising the Director of Food and Environmental Hygiene on the formulation of food safety measures, review of food safety standards in light of international practices, trends and developments, as well as risk communication strategies. The Expert Committee consists of academics, professionals, food experts, members of the trade and consumer groups, and other experts.

(A) Food Consumption Survey

8. Availability of population food consumption data is a pre-requisite for the conduct of a TDS. The first step of our TDS is therefore to conduct a Food Consumption Survey (FCS).

9. In 2000, the Food and Environmental Hygiene Department (FEHD) conducted a FCS on about 1 000 secondary school students in Hong Kong by means of a self-administered food frequency questionnaire with 93 food items. Dietary exposure studies focused on individual food hazards were then conducted based on these food consumption data, which were applicable only to secondary school students.

10. In 2004, FEHD commissioned the Chinese University of Hong Kong (CUHK) to conduct the Hong Kong Population-based FCS. The FCS is a comprehensive food consumption survey on Hong Kong people aged 20-84. The objectives of the FCS were as follows:

- (a) to obtain up-to-date food consumption information (e.g. the types and amounts of food consumed) among individuals in Hong Kong;
- (b) to collect weight measurements among individuals in Hong Kong;
- (c) to identify dishes consumed among individuals in Hong Kong; and
- (d) to develop recipes for the dishes identified (i.e. to gather information such as ingredient amounts and total

yield of each recipe).

The FCS data would enable the TDS to be conducted to give a more accurate estimation of the dietary exposures of the Hong Kong population to a range of food chemicals.

11. The CFS released the FCS report in April 2010². The Executive Summary of the report is at **Annex I**.

(B) Sampling and Food Preparation

12. The TDS will cover 150 food items which were developed based on the food consumption data of the FCS. They include the majority of food commonly consumed by the Hong Kong population. The TDS food list is at **Annex II**.

13. CFS has commissioned CUHK to carry out the sampling and food preparation work of the TDS. This would be conducted on four sampling occasions from March 2010 to February 2011. On each of the four sampling occasion, three samples of each of the 150 TDS food items would be purchased from different retail outlets in different regions of the territory. A total of 1 800 samples³ would then be collected. The three samples of each food item would then be prepared as they would normally be consumed, and combined to form a single composite sample for testing. In other words, 600 composite samples would be prepared for testing.

² The FCS report can be read at http://www.cfs.gov.hk/english/programme/programme_firm/programme_fcs.html.

³ Four sampling occasions x three samples x 150 food items = 1 800 samples.

14. A pilot run on sampling and food preparation was conducted in February 2010. The actual fieldwork started on 1 March 2010 and would be completed by end February 2011.

(C) Laboratory Analysis

15. Over 130 substances like pesticide residues, nutrients, heavy metals, etc. will be tested in the composite food samples. These substances were selected based on the following criteria: (a) recommendation from international authorities; (b) public health significance; and (c) public concern. A detailed list is at **Annex III**.

16. Depending on the substances to be tested, laboratory analysis would be performed by the Food Research Laboratory of CFS or GL. Laboratory analysis would start once the composite samples prepared by CUHK are ready and would be expected to complete in mid 2013.

(D) Dietary Exposure Estimation

17. Dietary exposures to the substances of different groups within the Hong Kong population, including people with average and high exposure level to different substances, and various population sub-groups, would then be estimated based on the FCS data and the laboratory analysis of the food samples. To assess the associated health risk, the dietary exposure estimated would then be compared to the relevant safety reference values for the food chemical of concern, and the nutritional reference values for the nutrient of concern.

18. The whole TDS would be completed in 2014.

ADVICE SOUGHT

19. Members are invited to note and comment on the progress of the first TDS in Hong Kong.

**Food and Health Bureau
Food and Environmental Hygiene Department
Centre for Food Safety
May 2010**

**Food Consumption Survey Report
Executive Summary**

1. This report presents the findings of the first territory-wide food consumption survey (Survey) conducted in Hong Kong in 2005-2007 to investigate the food consumption of Hong Kong adults aged 20 to 84 years. The Chinese University of Hong Kong was commissioned by the Food and Environmental Hygiene Department (FEHD) for the work of the Centre for Food Safety (CFS) to utilize in its risk assessment work to enable it to provide adequate protection of consumer health and food safety.
2. This Survey aimed to obtain up-to-date food consumption information (for example, the types and amounts of food consumed) among individuals in Hong Kong; collect weight measurements among individuals in Hong Kong; identify dishes consumed among individuals in Hong Kong; and develop recipes for the dishes identified. All objectives were achieved through three interviews and subsequent data management and analyses.
3. The three interviews and body weight measurement were conducted by trained interviewers. Interviewers used two non-consecutive days of 24-hour dietary intake (24-hr recall) questionnaires and a 110-item food frequency questionnaire (FFQ) to obtain food consumption estimates. Respondents' food knowledge and behavior were obtained through the food behavior questionnaire (FBQ). Socio-demographic information of the respondents was also collected.
4. The sample for the Survey was selected using two-stage stratified random sampling with quotas by age and gender. A total of 5,008 adults participated in the Survey, representing 48.1% of those originally selected as eligible. Not all respondents permitted a weight measurement, which was achieved among 4,971 or 99.3% of the respondents. At the end of the Survey, a food consumption database was developed, including a Food and Recipe Database with 1,706 foods, of which 1,429 were consumed by respondents of this Survey, along with 1,591 recipes. Data

collected during the Survey was analyzed, and the results presented in this report have been age- and gender- weighted and represent a population of about 5,394,000 Hong Kong residents aged 20-84.

Key Findings

Food Consumption Pattern from 24-hr Recall

5. Information on food consumption amounts were collected and analyzed. The main findings are presented in this report. The analyses resulted in several key findings. Concerning food consumption, the average of total daily consumption of solid food was found to be about 1.12 kg. Liquid food intake was about 1,860 ml per day on average, of which 57.3% (1,065.62ml) was from water. Fluids intake, which include water and other non-alcoholic beverages, soup, milk and milk beverages, but excluding water used for cooking, was found to be 1,787.11 ml and contributed to about 96% of the total liquid food intake.

6. Cereals and grains products were consumed in the amount of 488.75 g/day, 60.8% (297.16 g/day) of which was from the rice subgroup, which included items such as white rice, congee and brown rice. Wheat products made up another 33.5% of the cereals and grains products group. It was estimated that 8.65 g of this group were consumed as whole grains.

7. Vegetables and fruits were consumed in the amount of 176.96 g/day and 146.81 g/day respectively. Two thirds (68.4%) of the vegetables consumed were those of the leafy/stalk/shoot vegetables and brassica group. Soybeans and their products, with 8.62 g/day consumed on average, made up over half (61.0%) of the daily legume consumption of 14.13 g. When tubers such as potato and taro (about 8.05 g/day) were not included in the calculation, vegetables consumption was found to be 168.91 g/day. Only 2.58 g of the nuts and seeds group were consumed.

8. A total of 112.50 g/day of meat group, poultry group, and game group items was consumed. Meat was consumed in the amount of 74.23 g/day, 72.5% of which was from pork (53.81g/day). From the poultry group, chicken was consumed in the amount of 32.90 g/day, making up

88.0% of the total poultry consumption of 37.38 g/day. Only 0.89 g of the game group was consumed.

9. Fish and other aquatic animal (i.e. crustaceans and molluscs) consumption was found to be 70.78 g/day in total. The average daily fish consumption was 57.48 g, while crustaceans and molluscs (such as oyster and cuttlefish) were consumed in the amounts of 7.35 g/day and 5.95 g/day, respectively.

10. The consumption of egg and egg products was 15.18 g/day, more than 90% of which was from chicken eggs. Together with the legumes, meat, poultry, fish and aquatic animals mentioned above, as well as nuts, seeds and game, a total of 215.17 g of meat and meat alternatives were eaten daily, with more than 90% (198.46 g/day; 92.2%) from animal sources, and the remaining 7.8% from the plant sources such as legumes, nuts and seeds.

11. Milk and milk products were consumed in an amount of 34.23 g/day on average, of which about three-quarters (74.6%) was made up of the milk subgroup.

12. Dim sum, a group of local favorites, was consumed on average in the amount of 44.75g of per day. Additionally, the average daily consumption amounts for the sashimi and sushi group (4.68 g/day) and the burgers group (4.74 g/day) were only one-tenth each of the consumption of the dim sum group.

13. With regard to fluid consumption, non-alcoholic beverages were consumed in a total volume of 1,616.97 ml/day. Soups were consumed in the amount of 170.78 g/day. Among all fluids, water (1,065.62 ml) and tea (376.36 ml) made up by far the bulk of the total fluid consumption.

Anthropometry and Reported Health Status

14. A total of 47.1% of the population (54.2% of the males and 40.6% of the females) were overweight or obese according to the World Health Organization proposed classification of weight by BMI in adult Asians. Another 8.5% was underweight, with females in the youngest age group

(20-29 years) making up 29.8% of the underweight individuals. Hypertension was the most commonly reported diagnosed disease (12.5%), and 4.7% of the population reported to have diabetes.

Food Knowledge and Behavior

15. The FBQ revealed some ‘health-driven’ behaviors among the population. More than half of the women and more than one-third of the men did not eat meat fat or poultry fat or skin when eating these meats. About one-fifth of the population took nutritional supplements, mostly vitamins or minerals. A similar proportion took Chinese or other herbal medicines. Washing fruits and vegetables before consumption was almost universal. However, less than half (about 40%) of the population reported ‘never’ looking for nutrition information on food labels when purchasing biscuits, bread, canned food and beverages, while only a bit more than one-fourth (about 30%) of the population reported ‘often/always’ doing so.

16. Among the younger population aged 20 through 59 years, food safety was found to be ‘very important’ to 57.7% of the male and 68.7% of the female. Somewhat fewer, but again more than half of the males and females, also found ‘how well the food keeps’ to be ‘very important’. Less than half of the population found the other factors, i.e., taste, nutrition, price and ease of preparation, to be ‘very important’. However, this population’s behavior showed a general lack of attention to nutrition labels.

17. This subgroup aged 20 to 59 years was further asked how many servings of fruits and vegetables were needed for good health. Most (62.7%) of the females reported that two or more servings of fruits (one serving equals to the size of a medium orange or a handful of grapes) were needed. A similar proportion (61.1%) thought that two or more servings of vegetables (one serving in this Survey equals to a medium rice bowlful of cooked vegetable per serving) should be eaten daily, with only 32.3% believing that only one or less of these servings were needed. However, only 48.4% of the males reported that two or more servings of fruits should be eaten, while similarly only 46.9% thought that two or

more servings of vegetables were required, and 44.5% of them thought that one serving or less of vegetable was needed.

18. Finally, this same younger subgroup of population was asked about important diet/nutrient and disease relationships. While more than half of them could mention relationships between calcium and bone problems, sugar and diabetes, and fiber and digestive problems, only just less than half of them could mention relationships between dietary fat and heart problems, being overweight and heart problems, and dietary cholesterol and heart problems.

Conclusions and Recommendations

19. Food consumption information collected in this Survey will be useful in risk assessment work, including total diet studies. This report also summarized findings, including the measured weights of the population and the food behavior and knowledge information. These will be useful for public health policy formulation and for epidemiological and clinical work of a wide variety of professionals.

20. The adult population needs to become much more aware of the effects of their diets on their health. The forthcoming nutrition labeling scheme is a step in the right direction, and has the potential to become a key source of nutrition information for the public. However, from the results of this Survey, people will have to be much more motivated to use them as well as be effectively and appropriately educated in how to use them. At the same time, promotion of balanced diet should continue. Specific promotions using effective communications promoting whole grain could be considered, while also continuing to promote the '2 fruits plus 3 vegetables' message.

21. In order to obtain updated information of the population's food consumption pattern, which is essential for risk assessment on food safety and public health, it is suggested that food consumption trends be monitored every five to ten years. This is also useful for evaluating any food safety and healthy eating campaigns that may be undertaken. Continually changing food prices, food supplies and population demographics also warrant this exercise.

22. Additionally, since children and youth who are more susceptible to food risk have different food consumption behavior than adults, and eating behavior is developed during early childhood and youth, a food consumption survey of the younger generation under age 20 is suggested to be conducted soon. By doing so, the food consumption pattern of this population group thus captured could facilitate risk assessment work as well as the adoption of evidence-based comprehensive life course strategies on healthy eating.

Annex II
附件 II

List of 150 food items in the first TDS in Hong Kong

香港首個總膳食研究涵蓋的 150 項食物名單

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Cereal and cereal products (19 food items) 穀物及穀物製品 (19 項食物)		
Rice, white 白飯	252.93	--
Rice noodles 米粉 / 米線	38.94	Rice noodles/rice vermicelli, flat rice noodles 米粉 / 米線、河粉
Noodles, Chinese or Japanese style 麵條 (中式或日式)	23.59	Egg noodles, Shanghai noodles, Udon 全蛋麵、上海麵、烏冬
Bread, plain 麵包 (沒有餡)	22.52	White bread, wheat bread, plain roll 白麵包、麥包、餐包
Instant noodles 即食麵	21.5	Instant noodles, instant rice noodles 即食麵、即食米粉
Pasta, Western style 麵條 (西式)	20.29	Macaroni, spaghetti 通心粉、意大利粉
Oatmeal 麥皮 / 燕麥片	4.89	--
“Pineapple” bun 菠蘿包	3.76	--
Cakes 蛋糕 / 西餅	3.45	--
Rice, unpolished 粗磨米飯	3.35	Brown rice, red rice 糙米飯、紅米飯
Corn 粟米	3.21	--
Biscuits 餅乾	2.57	Saltine crackers, cookies, sandwich biscuits, wheat crackers 梳打餅、曲奇餅、夾心餅、麥餅
Bread, raisin 提子包	2.54	--
Sausage/ham/ luncheon meat bun 腸仔 / 火腿 / 午餐肉包	1.78	Sausage bun, ham bun, luncheon meat bun 腸仔包、火腿包、午餐肉包

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Breakfast cereals 穀物早餐	1.59	Corn based breakfast cereal, wheat based breakfast cereals 粟米片早餐、麥片早餐
Pastries 餡餅	1.53	Egg tart, coconut tart 蛋撻、椰撻
Deep-fried dough 油炸麵團食品	1.09	Fried fritter, sesame ball 油炸鬼、煎堆
Chinese steamed bread 饅頭	1.03	--
Pastries, Chinese * 中式餅點*	0.77	Traditional moon cake, Chinese almond cookies, wife cake 傳統月餅、杏仁餅、老婆餅
Vegetables and vegetable products (35 food items) 蔬菜及蔬菜製品 (35 項食物)		
Cabbage, Chinese flowering 菜心	43.96	--
Cabbage, Petiole Chinese 白菜	14.21	--
Lettuce, European 西生菜	12.1	--
Cabbage, Chinese 紹菜 / 黃芽白	6.77	--
Lettuce, Chinese 唐生菜	6.75	--
Tomato 番茄	5.87	--
Water spinach 蕹菜 / 通菜	5.29	--
Broccoli 西蘭花	4.54	--
Hairy gourd 節瓜	4.54	--
Chinese kale 芥蘭	4.47	--
Carrot/ Radish 甘筍 / 蘿蔔	4.24	--
Potato 馬鈴薯	3.49	--
Cabbage, European variety 椰菜	3.42	--
Wax gourd 冬瓜	3.19	--

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Onion 洋葱	2.93	--
Spinach 菠菜	2.9	--
Chinese spinach 莧菜	2.82	--
Potato, fried 炸薯	2.35	French fries, hash brown 薯條、薯餅
Bitter melon 苦瓜	2.11	--
Cucumber 青瓜 / 黃瓜	2.1	--
Mung bean sprout 綠豆芽 / 芽菜	2.06	--
Mushrooms 菇類	1.77	Button mushroom, straw mushroom, "Gold needle" mushroom 蘑菇、草菇、金菇
Sponge gourd 絲瓜	1.72	--
Eggplant 茄子 / 矮瓜	1.64	--
Mushroom, dried shiitake 乾冬菇	1.6	--
Spring onion 葱	1.58	--
Sweet pepper 燈籠椒	1.53	--
Celery 西芹	1.45	--
Pumpkin 南瓜	1.37	--
Zucchini 翠玉瓜	1.3	--
Garlic 蒜頭	1.23	--
Preserved vegetables 醃製蔬菜	1.23	Preserved mustard, preserved Sichuan mustard, preserved mustard green, preserved leaf mustard 梅菜、榨菜、雪菜 / 雪裡蕪、鹹酸菜
Watercress 西洋菜	1.2	--
Leaf mustard 芥菜	1.12	--

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Ear fungus * 雲耳 / 木耳*	0.42	--
Legumes, nuts and seeds and their products (6 food items) 豆類、堅果和種子及其製品 (6 項食物)		
Beancurd 豆腐	6.09	--
Green string beans (with pod) 青豆角	2.12	Green string beans (with pod), French beans (with pod), common beans 青豆角、邊豆 / 玉豆、四季豆 / 敏豆
Mung bean vermicelli 粉絲	1.12	--
Peanut 花生	1.03	--
Peanut butter # 花生醬 #	0.45	--
Fermented bean products * 發酵豆類製品*	0.37	Fermented black soybean, fermented bean curd 豆豉、腐乳
Fruits (17 food items) 水果 (17 項食物)		
Orange 橙	55.51	--
Apple 蘋果	21.46	--
Banana 香蕉	13.12	--
Pear 梨	11.31	--
Watermelon 西瓜	9.32	--
Pummelo / Grapefruit 柚子 / 西柚	4.4	Pummelo, grapefruit 柚子、西柚
Grapes 葡萄 / 提子	4.13	--
Papaya 木瓜	3.43	--
Dragon fruit 火龍果	3.01	--
Melons 蜜瓜類	2.85	Cantaloupe, honeydew 哈密瓜、蜜瓜
Longan/Lychee 龍眼 / 荔枝	2.78	Longan, lychee 龍眼、荔枝
Mango 芒果	2.17	--

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Peach 桃	1.75	--
Pineapple 菠蘿	1.43	--
Kiwi fruit 奇異果	1.24	--
Plum 李子 / 布林	1.21	--
Persimmon * 柿子*	0.82	--
Meat, poultry and game (12 food items) 肉類、家禽及野味 (12 項食物)		
Pork 豬肉	29.69	--
Chicken meat 雞肉	24.39	--
Beef 牛肉	12.14	--
Meat sausage 肉腸	4.74	Meat sausage, chicken sausage, cheese sausage 肉腸、雞肉腸、芝士腸
Barbequed pork 叉燒	4.38	--
Chicken, soy sauce 豉油雞	4.36	--
Ham 火腿	3.77	--
Roasted pork 燒肉	3.45	--
Roasted duck/goose 燒鴨 / 燒鵝	2.66	--
Luncheon meat 午餐肉	1.95	--
Mutton * 羊肉*	0.57	--
Pig liver * 豬潤 / 豬肝*	0.26	--
Egg and egg products (3 food items) 蛋及蛋類製品 (3 項食物)		
Egg, chicken 雞蛋	13.86	--
Egg, salted # 鹹蛋 #	0.52	--
Egg, lime preserved # 皮蛋 #	0.37	--

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Fish and seafood (19 food items) 魚類及海產 (19 項食物)		
Fish, Golden thread 紅衫	6.8	--
Fish, Grass carp 鯪魚	6.44	--
Shrimp / Prawn 蝦	5.12	--
Fish ball / fish cake 魚蛋 / 魚片	5.09	--
Fish, Pomfret 鯧魚 (倉魚)	2.81	--
Fish, Mandarin fish 桂花魚	1.89	--
Fish, Sole 龍脷 / 撻沙	1.85	--
Fish, Yellow croaker 黃花魚	1.79	--
Fish, Dace, minced 絞鯪魚肉	1.5	--
Crab 蟹	1.41	--
Squid 魷魚	1.23	--
Fish, Big head 大頭魚	1.19	--
Fish, Horse head 馬頭	1.1	--
Fish, Salmon 三文魚	1.08	--
Fish, Grey mullet 烏頭	1.07	--
Scallop * 扇貝 / 帶子*	0.86	--
Fish, Tuna # 吞拿魚 / 金槍魚 #	0.54	--
Fish, Grouper * 海斑*	0.36	Green grouper, Leopard coral grouper, Tiger grouper 青斑、東星斑、老虎斑
Oyster # 蠔 #	0.35	--
Dairy products (5 food items) 乳類製品 (5 項食物)		
Milk, whole 全脂奶	13.64	--

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天 計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Milk, skim 脫脂奶	10.21	--
Ice-cream 雪糕	1.37	--
Yoghurt 乳酪	1.08	--
Cheese * 芝士*	0.89	Mozzarella cheese, Cheddar cheese 莫澤雷勒芝士 / 蒙莎莉芝士、車打芝士
Fats and oils (2 food items) 油脂類 (2 項食物)		
Butter 牛油	1.05	--
Oil, vegetable * 植物油*	0.93	Peanut oil, corn oil, canola oil, olive oil 花生油、粟米油、芥花籽油、橄欖油
Beverages, alcoholic (2 food items) 酒精飲品 (2 項食物)		
Beer 啤酒	28.4	--
Red wine 紅酒	1.77	--
Beverages, non-alcoholic (10 food items) 不含酒精飲品 (10 項食物)		
Water, drinking 飲用水	973.11	--
Tea 茶	281.93	--
Water, bottled, distilled 樽裝蒸餾水	92.51	--
Tea, milk tea 奶茶	56.78	--
Carbonated drink 汽水	31.88	Cola, cream soda, orange soda 可樂汽水、忌廉梳打汽水、橙汁汽水
Coffee 咖啡	30.96	--
Soybean drink 豆奶飲品	19.89	Soybean drink, soybean milk 豆奶飲品、豆漿
Malt drink 麥芽飲品	8.12	Horlick's, Ovaltine 好立克、柯華田
Fruit and vegetable juice 蔬果汁	6.32	Orange juice, apple juice, watermelon juice 橙汁、蘋果汁、西瓜汁
Tea, chrysanthemum 菊花茶	3.91	--
Mixed dishes (12 food items) 混合食品 (12 項食物)		

Food item 食物	Consumption amount (g/person/day) 消費量 (以每人每天計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Chinese soup 中式湯水	151.52	--
Dumpling, including wonton 雲吞 / 水餃	6.7	--
Steamed rice-rolls with filling 腸粉 (有餡)	5.56	Steamed rice-roll with beef/barbecued pork/vegetables 牛肉 / 叉燒 / 齋腸粉
Dumpling, steamed 蒸餃子	3.36	Shrimp dumpling, Dumpling stuffed with pork and vegetable, Shanghai-style steamed pork dumpling 蝦餃、菜肉餃、小籠包
Hamburger 漢堡包	3.09	Beef burgers, fish burger, sausage and egg muffin, sausage burger, chicken burger 牛肉漢堡、魚柳包、豬柳蛋漢堡、豬柳漢堡、雞柳漢堡
Glutinous rice dumpling 糰	2.67	Glutinous rice wrapped in lotus leaf, Glutinous rice dumpling with pork 糯米雞 / 珍珠雞、鹹肉糰
Steamed barbecued pork bun 叉燒包	2.57	--
Siu Mai 燒賣	2.54	--
Steamed minced beef ball 牛肉球	1.98	--
Turnip cake 蘿蔔糕	1.39	--
Steamed rice-rolls, plain 淨腸粉	1.3	--
Dumpling, pan-fried * 煎餃子*	0.93	Pan-fried dumpling stuffed with pork and vegetables 煎菜肉餃子
Snack foods (1 food item) 零食食品 (1 項食物)		
Potato chips * 薯片*	0.62	--
Sugars and confectionery (2 food items) 糖類及甜點 (2 項食物)		
Granulated white sugar 白砂糖	1.43	--
Chocolate * 朱古力*	0.49	--
Condiments, sauces and herbs (5 food items) 調味料、醬油及香草 (5 項食物)		
Soya sauce 豉油	4.45	--
Cornstarch 粟米澱粉 / 粟粉	1.8	--

Food item 食物	Consumption amount[@] (g/person/day) 消費量[@] (以每人每天計算)(克)	Example of food(s) to be sampled 抽取樣本的食物
Table salt 餐桌鹽 (幼鹽)	1.55	--
Tomato paste/ ketchup 番茄醬 / 番茄汁	1.3	--
Oyster sauce # 蠔油 #	0.72	--

Note 註：

@ Consumption amounts were the average consumption amounts of the Hong Kong population extracted from the Hong Kong Population-based Food Consumption Survey (FSC), which were drawn by combining similar items together or from single food items.

消費量指香港市民食物消費量調查所得的香港市民平均消費量，是綜合類似食物的消費量計算或單一項食物的消費量。

* Added to food list to facilitate food mapping.

加入食物名單，以便進行食物對應工作。

Added to food list due to special concern on potential contaminant levels.

基於潛在污染物含量備受關注，因此加入食物名單。

**List of substances to be tested
for the first TDS in Hong Kong**

香港首個總膳食研究檢測的物質名單

Substances selected 選定的物質	Substances (tested simultaneously) 物質 (同時檢測)	
<i>Persistent Organic Pollutants (POPs) (12)</i> 持久性有機污染物 (12 種)		
<ul style="list-style-type: none"> ◆ Aldrin 艾氏劑 ◆ Chlordane 氯丹 ◆ DDT 滴滴涕 ◆ Dieldrin 狄氏劑 ◆ Dioxins 二噁英 ◆ Endrin 異狄氏劑 ◆ Furans (refer to dibenzofurans) 呋喃 (指二苯並呋喃) ◆ Heptachlor (including heptachlor epoxide) 七氯 (包括環氧七氯) ◆ Hexachlorobenzene (HCB) 六氯代苯 ◆ Mirex 滅蟻靈 ◆ Polychlorinated biphenyls (PCBs), dioxin-like 類似二噁英的多氯聯苯 ◆ Toxaphene 毒殺芬 		
<i>Pesticide residues (excluding POPs) – Organophosphorus (48)</i> 殘餘除害劑 (持久性有機污染物除外) – 有機磷 (48 種)		
<ul style="list-style-type: none"> ◆ Diazinon 二嗪磷 ◆ Fenitrothion 殺螟硫磷 ◆ Malathion 馬拉硫磷 ◆ Parathion, methyl 甲基對硫磷 ◆ Parathion 對硫磷 	<ul style="list-style-type: none"> ◆ Acephate 乙酰甲胺磷 ◆ Azinphos, methyl- 保棉磷 ◆ Bensulide 地散磷 ◆ Cadusafos 硫線磷 ◆ Chlorpyrifos 毒死蜱 ◆ Chlorpyrifos, methyl- 甲基毒死蜱 ◆ Coumaphos 蠅毒磷 ◆ Dichlorvos 敵敵畏 ◆ Dicrotophos 百治磷 ◆ Dimethoate and omethoate 樂果和氧樂果 ◆ Disulfoton 乙拌磷 	<ul style="list-style-type: none"> ◆ Mevinphos 速滅磷 ◆ Monocrotophos 久效磷 ◆ Naled 二溴磷 ◆ Oxydemeton, methyl- 亞福磷 ◆ Phenthoate 稻豐散 ◆ Phorate 甲拌磷 ◆ Phosalone 伏殺硫磷 ◆ Phosmet 亞胺硫磷 ◆ Phosphamidon 磷胺 ◆ Phoxim 辛硫磷 ◆ Pirimiphos, methyl- 甲基嘧啶磷

Substances selected 選定的物質	Substances (tested simultaneously) 物質 (同時檢測)	
	<ul style="list-style-type: none"> ◆ Edifenphos 敵瘟磷 ◆ Ethion 乙硫磷 ◆ Ethoprophos 滅線磷 ◆ Fenamiphos 苯線磷 ◆ Fenitrothion 殺螟硫磷 ◆ Fenthion 倍硫磷 ◆ Fosthiazate 噻唑磷 ◆ Isocarbophos 水胺硫磷 ◆ Isofenphos, methyl- 甲基異柳磷 ◆ Methamidophos 甲胺磷 ◆ Methidathion 殺撲磷 	<ul style="list-style-type: none"> ◆ Profenofos 丙溴磷 ◆ Prothiophos 丙硫磷 ◆ Quinalphos 啞硫磷 ◆ Terbufos 特丁硫磷 ◆ Tetrachlorvinphos 殺蟲畏 ◆ Tolclofos, methyl- 甲基立枯磷 ◆ Triazophos 三唑磷 ◆ Tribufos 脫葉磷 ◆ Trichlorfon 敵百蟲 ◆ Vamidothion 蚜滅磷
<p><i>Pesticide residues (excluding POPs) – Organochlorine (2)</i> 殘餘除害劑 (持久性有機污染物除外) – 有機氯 (2 種)</p>		
<ul style="list-style-type: none"> ◆ Endosulfan (α, β and sulfate) 硫丹 (α, β和硫酸硫丹) ◆ Hexachlorocyclohexane (α, β, δ and γ) 六氯環己烷 (α、β、δ 和 γ) 		
<p><i>Pesticide residues (excluding POPs) – Pyrethroids and pyrethrins (15)</i> 殘餘除害劑 (持久性有機污染物除外) – 擬除蟲菊酯和除蟲菊素 (15 種)</p>		
<ul style="list-style-type: none"> ◆ Cyfluthrin 氟氯氰菊酯 ◆ Cyhalothrin 氯氟氰菊酯 ◆ Cypermethrin 氯氰菊酯 ◆ Deltamethrin 溴氰菊酯 ◆ Fenpropathrin 甲氰菊酯 ◆ Fenvalerate 氰戊菊酯 ◆ Permethrin 氯菊酯 	<ul style="list-style-type: none"> ◆ Bifenthrin 聯苯菊酯 ◆ Etofenprox 醚菊酯 ◆ Flucythrinate 氟氰戊菊酯 ◆ Flumethrin 氟氯苯菊酯 ◆ Fluvalinate 氟胺氰菊酯 ◆ Pyrethrins 除蟲菊素 ◆ Resmethrin 苳呋菊酯 ◆ Tefluthrin 七氟菊酯 	
<p><i>Pesticide residues (excluding POPs) – Carbamates (19)</i> 殘餘除害劑 (持久性有機污染物除外) – 氨基甲酸酯 (19 種)</p>		
	<ul style="list-style-type: none"> ◆ Aldicarb 涕滅威 ◆ Benfuracarb 丙硫克百威 ◆ Butylate 丁草敵 ◆ Carbaryl 甲萘威 ◆ Carbofuran 克百威 ◆ Cycloate 環草敵 ◆ S-ethyl dipropyl thiocarbamate 茵草敵 ◆ Fenobucarb (BPMC) 仲丁威 	<ul style="list-style-type: none"> ◆ Isoprocarb 異丙威 ◆ Methiocarb 甲硫威 ◆ Methomyl 滅多威 ◆ Molinate 禾草敵 ◆ Oxamyl 殺線威 ◆ Phenmedipham 甜菜寧 ◆ Pirimicarb 抗蚜威 ◆ Propamocarb 霜霉威 ◆ Thiobencarb 禾草丹

Substances selected 選定的物質	Substances (tested simultaneously) 物質 (同時檢測)	
	<ul style="list-style-type: none"> ◆ Formetanate hydrochloride 伐蟲脞鹽酸鹽 ◆ Triallate 野麥畏 	
<i>Heavy metals (8)</i> 重金屬 (8 種)		
<ul style="list-style-type: none"> ◆ Aluminium 鋁 ◆ Arsenic, inorganic 無機砷 ◆ Cadmium 鎘 ◆ Lead 鉛 ◆ Methyl mercury 甲基汞 	<ul style="list-style-type: none"> ◆ Antimony 銻 ◆ Nickel 鎳 ◆ Tin 錫 	
<i>Processing contaminants (1)</i> 食物加工所衍生的污染物 (1 種)		
<ul style="list-style-type: none"> ◆ Acrylamide 丙烯酰胺 		
<i>Mycotoxins (2)</i> 霉菌毒素 (2 種)		
<ul style="list-style-type: none"> ◆ Aflatoxins (total) 黃曲霉毒素總量 	<ul style="list-style-type: none"> ◆ Ochratoxin A 赭曲霉毒素 A 	
<i>Other contaminants (1)</i> 其他污染物 (1 種)		
	<ul style="list-style-type: none"> ◆ Polybrominated diphenyl ethers (PBDEs) 多溴聯苯醚 	
<i>Nutrients – Fatty acids (4)</i> 營養素 – 脂肪酸 (4 種)		
<ul style="list-style-type: none"> ◆ Saturated fatty acid 飽和脂肪酸 ◆ Trans fatty acid 反式脂肪酸 	<ul style="list-style-type: none"> ◆ Polyunsaturated fatty acid 多元不飽和脂肪酸 ◆ Monounsaturated fatty acid 單元不飽和脂肪酸 	
<i>Nutrients – Elements (12)</i> 營養素 – 元素 (12 種)		
<ul style="list-style-type: none"> ◆ Sodium 鈉 	<ul style="list-style-type: none"> ◆ Calcium 鈣 ◆ Cobalt 鈷 ◆ Copper 銅 ◆ Iron 鐵 ◆ Lithium 鋰 ◆ Magnesium 鎂 ◆ Manganese 錳 ◆ Molybdenum 鉬 ◆ Phosphorus 磷 ◆ Potassium 鉀 ◆ Zinc 鋅 	
<i>Nutrients – Others (7)</i> 營養素 – 其他 (7 種)		
<ul style="list-style-type: none"> ◆ Energy 能量 ◆ Protein 蛋白質 ◆ Available carbohydrates 可獲得 		

Substances selected 選定的物質	Substances (tested simultaneously) 物質 (同時檢測)
碳水化合物 ♦ Sugars 糖 ♦ Dietary fibre (total) 膳食纖維總量 ♦ Total fat 總脂肪 ♦ Cholesterol 膽固醇	