

Risk Assessment Studies

Report No. 33

**NUTRIENT CONTENTS OF
COMMON NON-PREPACKAGED BEVERAGES
IN HONG KONG**

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Centre for Food Safety
Food and Environmental Hygiene Department
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EXECUTIVE SUMMARY

The Centre for Food Safety (CFS) has conducted a study to determine the nutrient contents of common non-prepackaged beverages.

The report presents the nutrient content information of 73 types of non-prepackaged beverages. Laboratory analyses for energy and nine nutrients of local public health interest were conducted by the Food Research Laboratory of CFS.

The results showed that energy and sugars contents of non-prepackaged beverages vary, whilst their cholesterol and dietary fibre contents were generally low. Addition of sugar increased the energy and sugars content of beverage. Less sugar “less sweet”-version cold beverages were generally lower in energy and sugars than their regular versions.

In order to prevent excess intake of energy and sugars from non-prepackaged beverages, members of the public are advised to choose non-prepackaged beverages with lower energy and sugars contents, add less sugar to hot beverages, and order less sugar “less sweet” version of cold beverages instead of regular version. Patrons should also maintain balanced diet and limit the consumption of sugary beverages.

Members of the trade are advised to provide sugar or syrup to consumers separately instead of mixing them in beverages before serve, add less sugar to beverages if they must be pre-sweetened before serving to consumers, and provide less sugar “less sweet”-version beverages to consumers.

Nutrient Contents of Common Non-prepackaged Beverages in Hong Kong

OBJECTIVES

This study aims to reveal the nutrient contents of common non-prepackaged beverage items in Hong Kong, and to compare the energy and sugar contents of hot beverages with and without added sugars, as well as cold beverages with regular and “less-sweet” (少甜) versions.

BACKGROUND

2. Food is essential to human life because it is the source of energy and nutrients. Eating the right amount of different kinds of food is the key to a balanced diet and optimal nutrition. Many chronic diseases such as coronary heart disease, diabetes and certain types of cancer are related to imbalanced diet. These nutrition-related diseases are important public health problems in many parts of the world including Hong Kong.

3. Knowing the nutrient contents of food is crucial for making healthy food choices. To establish a database of nutrient composition of local food items, the Food Research Laboratory (FRL) has started conducting nutrient analysis of local foods since 2002. The latest study on the nutrient values of fruit and vegetables was completed and released in June 2007.

4. Recently, there has been discussion on the consumption of energy-dense food regarding their effect on unhealthy weight gain. Most local common non-prepackaged beverages are sugar-sweetened, and are examples of energy-dense food.

5. According to the Population Health Survey 2003-04, food choices of Hong Kong people were affected by concerns over the nutrition contents. It was found that sugars content was one of the major concerns. 47.7% respondents would choose or avoid certain foods by consideration of the sugars content.^{1,2}

6. Nevertheless, there has been no systematic analysis on the nutrient contents of non-prepackaged beverages that are popular and commonly found in Hong Kong. To fill this gap, the Centre for Food Safety (CFS) initiated a study on the nutrient composition of common non-prepackaged beverages that are locally available.

Non-prepackaged beverages

7. In Hong Kong, an international metropolitan, foods are being introduced from all over the world. With increasing globalisation, foods and beverages popular in other countries or areas may soon be introduced into the Hong Kong market. An earlier example that gained popularity locally was pearl tapioca drinks from Taiwan that was introduced more than ten years ago. More recently, specialty coffees from the western world also gained their foothold locally. Together with our local choices, Hong Kong-style milk tea, “yuan-yang”, salted lemon soda, red bean icy drink, sour plum drink, just to name a few, tea restaurants, coffee shops and fast food restaurants around the corner have a long list of beverages to offer.

8. The nutrient values of the non-prepackaged beverages vary greatly, depending on the types and amounts of food ingredients.

Nutrition and noncommunicable diseases

9. Unhealthy diet is one of the major lifestyle risk factors related to development of noncommunicable diseases (NCDs). Together with physical inactivity, they are among the leading causes of NCDs, including cardiovascular disease and certain types of cancer. As part of the recommendation for prevention of chronic diseases, the World Health Organization (WHO) and Food and Agriculture Organization of the United Nations (FAO) proposed a set of population nutrient intakes to enhance health (Annex I).³

10. WHO/FAO considered that restriction of free sugars (i.e., all monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and fruit juices) was likely to contribute to reducing risk of unhealthy weight gain. Concerning the consumption of sugars-sweetened beverages, WHO and FAO considered that high intake of free sugars in beverages probably promotes weight gain. Overweight and obesity increase the risk of cardiovascular diseases, certain cancers, and type 2 diabetes.³

11. It was also considered that frequency and amount of sugars intake increase the risk of dental caries.³

SCOPE OF STUDY

12. The study covered the common non-prepackaged beverages sold on the local market. A total of 73 non-prepackaged beverage items were sampled for nutrient analysis. Differences in nutrient contents in items of different amount of added sugar were studied for 23 hot beverages and 50 cold beverages. A list of samples taken was shown in Annex II.

METHOD

Sampling

13. The food samples were purchased and analysed from August 2006 to September 2007. For each non-prepackaged item, one sample was randomly collected from a food premise in each of the 10 different districts, which was randomly selected from the 18 districts of Hong Kong.

14. During sample collection, hot beverages were collected as “no sugar added” whenever possible. On the other hand, for cold beverages, regular version and less sugar “less sweet” version were collected at the same time as far as possible.

Laboratory analysis

15. Laboratory tests were performed by the Food Research Laboratory (FRL) of the CFS. For each food item, the 10 samples were paired and formed 5 composite samples for nutrient analyses. All tests were conducted using single-laboratory validated methods. A brief description of the test methods is shown in Annex III.

Data analysis

16. The nutrient contents of non-prepackaged beverages were mainly presented in per 100 ml basis. Mean values for energy and content of each nutrient were reported, and the values were corrected to two significant figures. If the level of a nutrient is too low for reliable reporting, the term “trace” is indicated (refer to Annex IV for details).

17. The average result of these 5 composite samples will be presented as the mean energy and nutrient contents of that particular non-prepackaged beverage in the report.

RESULTS AND DISCUSSION

18. In this study, nutrient contents of 73 non-prepackaged beverages were examined. The value of energy, carbohydrate, protein, total fat, saturated fat, cholesterol, sugars, dietary fibre, calcium, and sodium per 100 ml of the samples are presented in Annex V.

Content of nutrients

19. The energy content of the non-prepackaged beverage samples ranged from 12 kcal to 87 kcal per 100ml. The energy in the samples mainly came from sugars. Among all non-prepackaged beverage samples, an average of 60% and a maximum of 92% energy came from sugars. In more than 60% of the beverage samples, sugars contributed to more than a half of the total energy. Sugars content in the samples ranged from 0g to 12g per 100ml. The sample with the highest energy and sugars contents per 100 ml was Red bean icy drink (regular) (紅豆冰 (普通)).

20. On the other hand, the fat content of many samples are low, more than one third of them (26 samples) contained 0g or only trace amount of fat. The fat content of the remaining samples ranged from 0.3g to 3.9g per 100ml. Cholesterol was absent in more than half of the samples, while its content is low in other samples, ranged from trace amount to 8.3mg per 100ml. The sample with the highest fat content per 100 ml was “Cendol” icy drink (regular) (珍多冰 (普通)). Most samples (89%) contained no or only trace amount of dietary fibre.

Hot beverages

21. In this study, 23 hot beverage samples have been collected. The energy content of 100ml hot beverage samples ranged from 12 kcal to 75 kcal, with a mean of 41 kcal. The three hot beverage samples with the highest and lowest energy content were listed in Table 1 and Table 2 respectively.

Table 1. Hot beverages with the highest energy content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Milk tea with pearl tapioca (No sugar added) 珍珠奶茶 (不加糖)	75	21	5.3
Caffe Mocha (No sugar added) 朱古力咖啡 (不加糖)	71	30	7.5
Hot chocolate drink (No sugar added) 朱古力飲品 (不加糖)	57	23	5.8

Table 2. Hot beverages with the lowest energy content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Espresso (No sugar added) 特濃咖啡 (不加糖)	12	0	0
Lemon tea (No sugar added) 檸檬茶 (不加糖)	15	3	0.82
Lemon coffee (No sugar added) 檸檬咖啡 (不加糖)	18	9	2.2

22. The sugars content of 100ml hot beverage samples ranged from 0g to 11g, with a mean of 5.3g. As 1 gram sugar contributes to 4 kcal energy, from calculation, it was found that the sugar in these hot beverages contributed to 0 kcal to 44 kcal per 100 ml, with a mean of 21 kcal per 100 ml. The three hot beverage samples with the highest and lowest sugars content were listed in Table 3 and Table 4 respectively.

Table 3. Hot beverages with the highest sugars content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Sour plum drink 酸梅湯	51	44	11
Citron tea 柚子茶	47	40	10
Lemon and Kumquat honey 檸檬金桔蜜	54	38	9.5

Table 4. Hot beverages with the lowest sugars content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Espresso (No sugar added) 特濃咖啡 (不加糖)	12	0	0
Soybean milk (No sugar added) 豆漿 (不加糖)	28	3	0.74
Lemon tea (No sugar added) 檸檬茶 (不加糖)	15	3	0.82

23. The content of energy and energy from sugars per 100 ml of hot beverages sampled were shown in Figure 1.

24. Sugar is usually added to some hot beverages such as coffee and tea before consumption for a better taste. The energy and sugars content of hot beverages can be affected by the amount of sugar added. 13 samples of individually packed sugars provided by restaurants and cafes were obtained and weighed. Their weights varied from about 4.1g to 11.5g per pack, with an average of about 7.1g (or about 1.5 teaspoons) per pack. One teaspoon granulated sugar contains 4.2g sugars and provides 16 kcal energy.⁴ The sugars content of hot beverages (1 cup, 240 ml) with no added sugar, one teaspoon added sugar and two teaspoons added sugar were compared in Figure 2.

25. It was found that adding one teaspoon sugar to hot beverages increased their sugars content by 23% to 236%, with a mean increase of 77%. Adding two teaspoon sugar, on the other hand, contributed to 47% to 473% increase of sugars content, with a mean increase of 154%.

26. Concerning the energy content, it was found that adding a teaspoon sugar to a cup (240 ml) of hot beverages increased the energy content by 6% to 56%, with a mean increase of 21%. Adding two teaspoon sugar to a cup of hot beverages increased the energy content by 18% to 111%, with a mean increase of 43%. The energy contents of hot beverages with different amount of added sugar were compared in Figure 3.

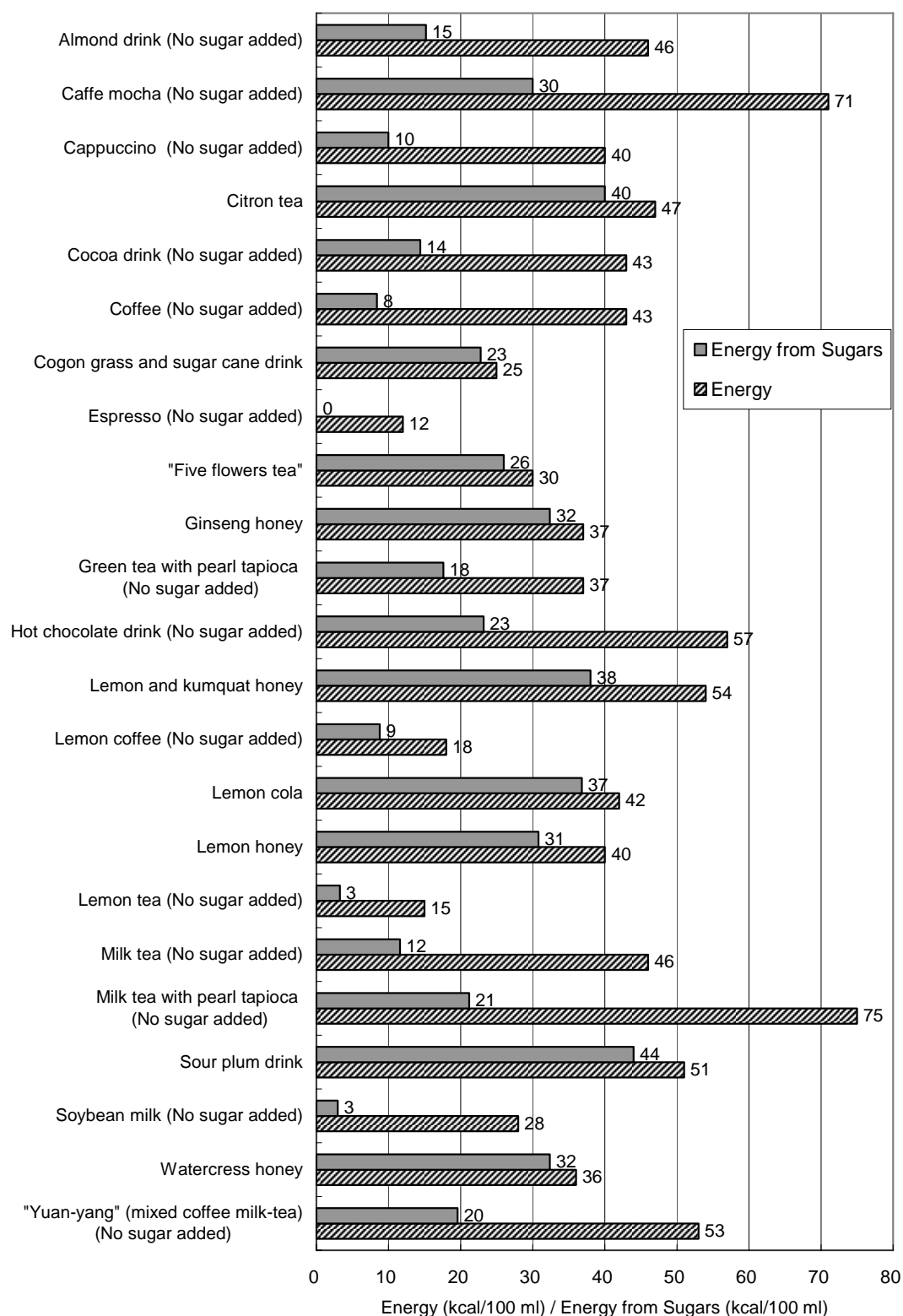


Figure 1. Content of energy and energy from sugars of hot beverages (per 100 ml)

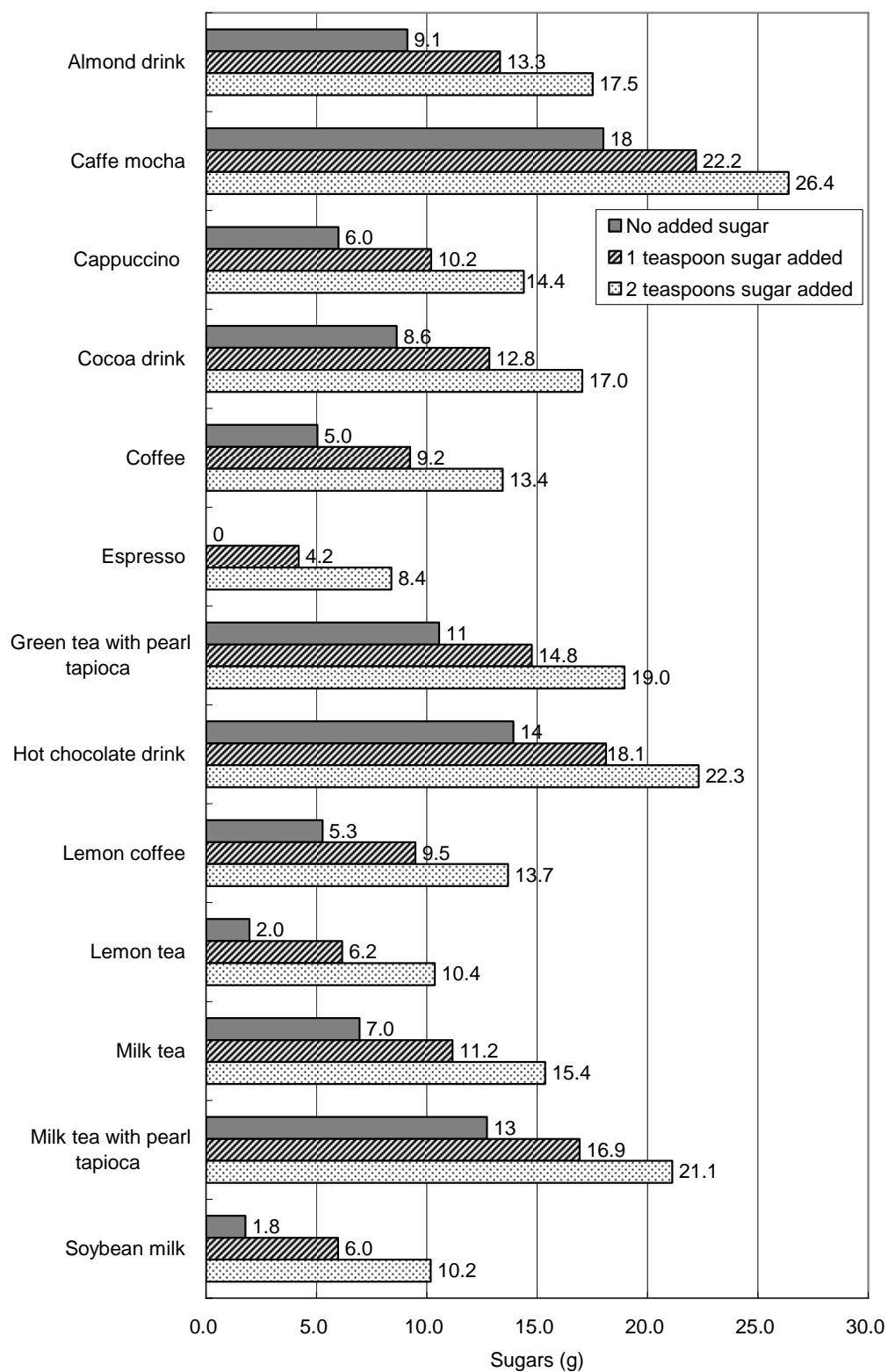


Figure 2. Comparison of sugars content of hot beverages with different amount of added sugar (g/ 240 ml)

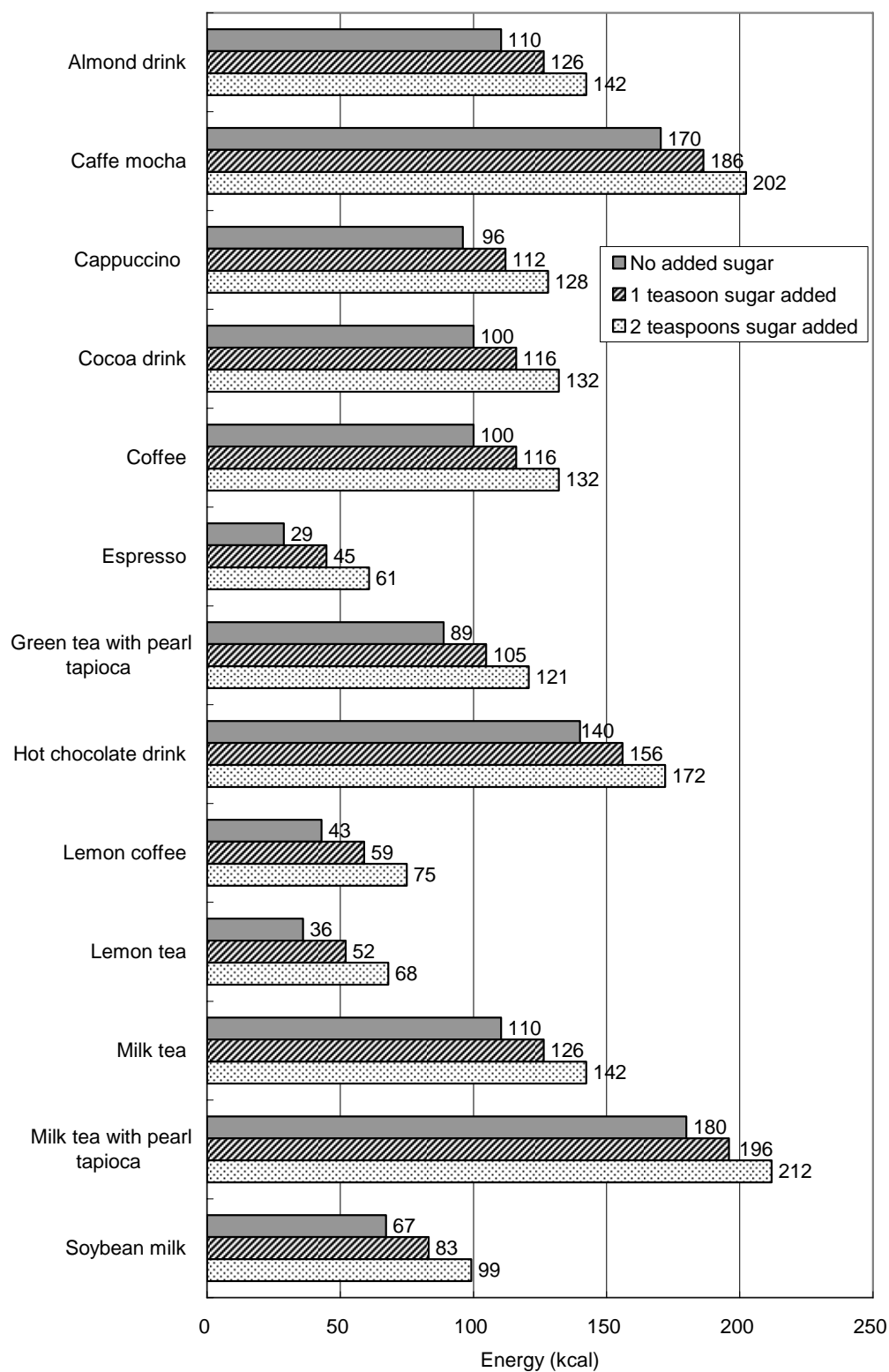


Figure 3. Comparison of energy content of hot beverages with different amount of added sugar (kcal/ 240 ml)

Cold beverages

27. 50 cold beverage samples have been collected. The energy content of 100ml cold beverage samples ranged from 23 kcal to 87 kcal, with a mean of 48 kcal. The three cold beverage samples with the highest and lowest energy content were listed in Table 5 and Table 6 respectively.

Table 5. Cold beverages with the highest energy content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Red bean icy drink (Regular) 紅豆冰 (普通)	87	48	12
Tri-colour icy drink (Regular) 三色冰 (普通)	83	44	11
“Cendol” icy drink (Regular) 珍多冰 (普通)	80	30	7.5

Table 6. Cold beverages with the lowest energy content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Iced lemon soda 凍檸檬梳打	23	21	5.3
Iced salted lemon soda 凍鹹檸檬梳打	24	21	5.3
Iced lemon honey (Less sweet) 凍檸蜜(少甜)	24	20	5.0

28. The sugars content of 100ml cold beverage samples ranged from 3.9g to 12g, with a mean of 7.2g. From calculation, these sugars contributed to 16 kcal to 48 kcal of energy per 100 ml beverages, with an average contribution of 29 kcal energy per 100 ml. The three cold beverages with the highest and lowest sugars content were listed in Table 7 and Table 8 respectively.

Table 7. Cold beverages with the highest sugars content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Red bean icy drink (Regular) 紅豆冰 (普通)	87	48	12
Tri-colour icy drink (Regular) 三色冰 (普通)	83	44	11
Pineapple icy drink (Regular) 菠蘿冰 (普通)	53	44	11

Table 8. Cold beverages with the lowest sugars content per 100 ml

	Energy (kcal)	Energy from Sugars (kcal)	Sugars (g)
Iced milk tea with pearl tapioca (Less sweet) 凍珍珠奶茶 (少甜)	57	16	3.9
Iced green tea with pearl tapioca (Less sweet) 凍珍珠綠茶 (少甜)	30	16	4.0
Iced cocoa drink (Less sweet) 凍啫咕 (少甜)	41	18	4.5

29. The content of energy and energy from sugars per 100 ml of cold beverages sampled were compared in Figure 4.

30. In many cases, sugar was added to cold beverages before serving. However, as some consumers prefer to have less sugar in their cold beverages, some food premises provide cold beverages in less sugar “less sweet” version upon request. Less sugar “less sweet” cold beverages were compared with their regular counterparts in terms of their energy and sugars contents. It was found that less sugar “less sweet” version provided 6% to 36% less energy than regular cold beverages. The mean difference was 17% (Figure 5). Concerning the sugars contents, less sugar “less sweet” beverages contained 3% to 36% less sugars than their regular counterparts, with a mean difference of 22% (Figure 6).

31. The difference in energy and sugars contents can be small between regular and less sugar “less sweet” versions of some cold beverages, such as Mixed fruit punch (什果賓治) and Mixed fruit icy drink (什果冰), and Tri-colour icy drink (三色冰). For other cold beverages such as Iced lemon tea (凍檸檬茶), Iced milk tea (凍奶茶) and Iced green tea with pearl tapioca (凍珍珠綠茶), the difference in energy and sugars contents between the two versions can be greater.

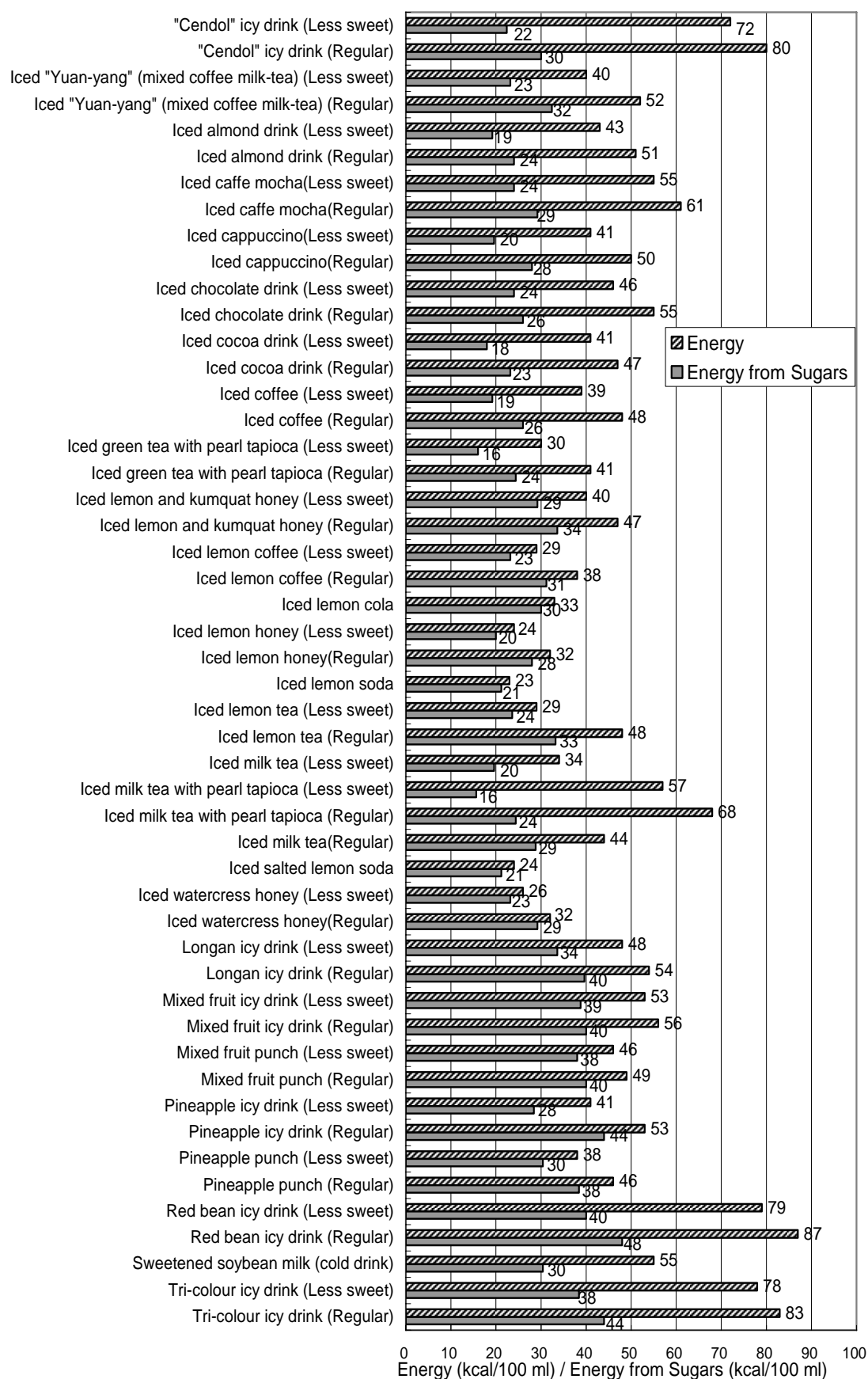


Figure 4. Content of energy and energy from sugars of cold beverages (per 100 ml)

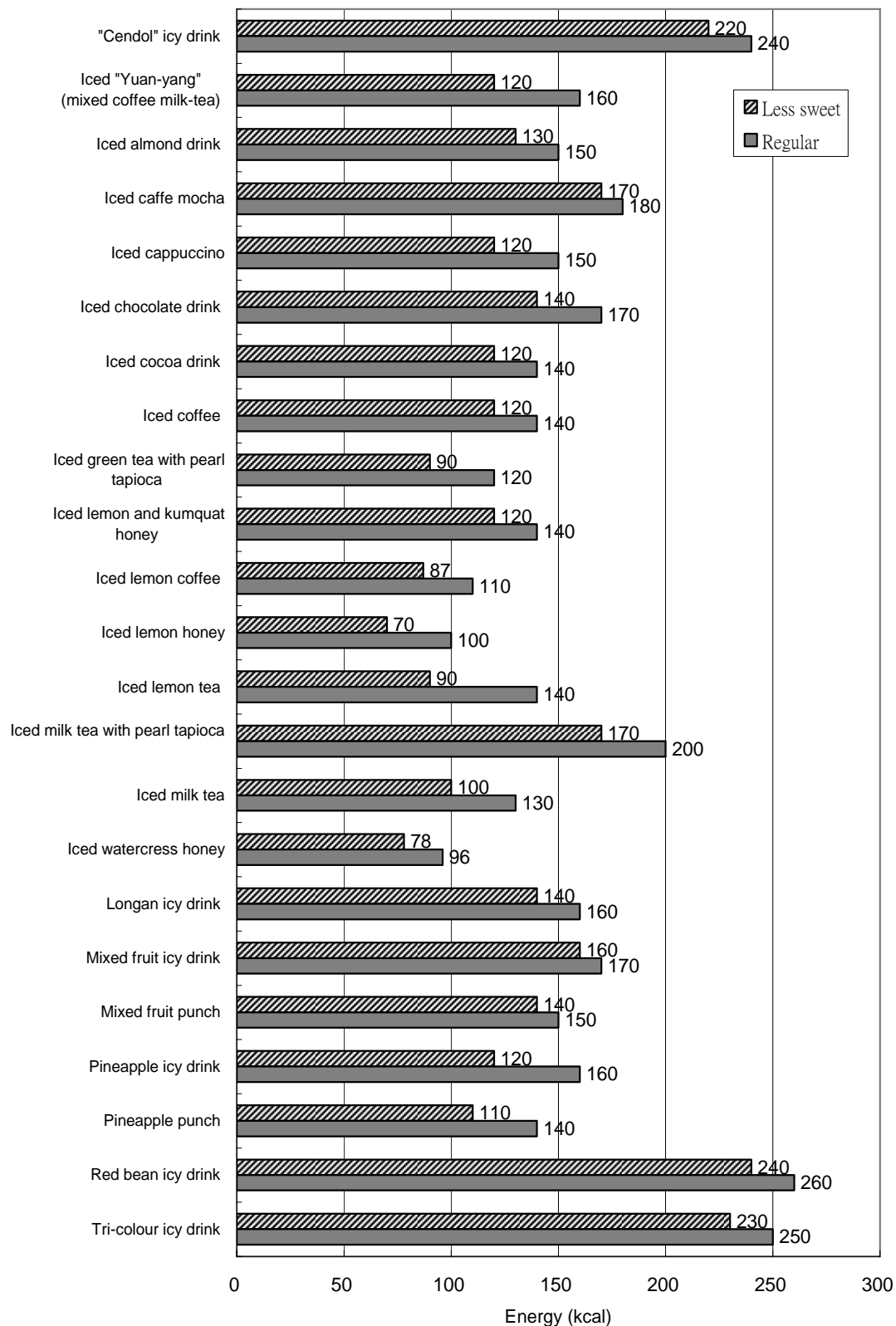


Figure 5. Comparison of energy content of different versions of cold beverages (kcal/ 300 ml)

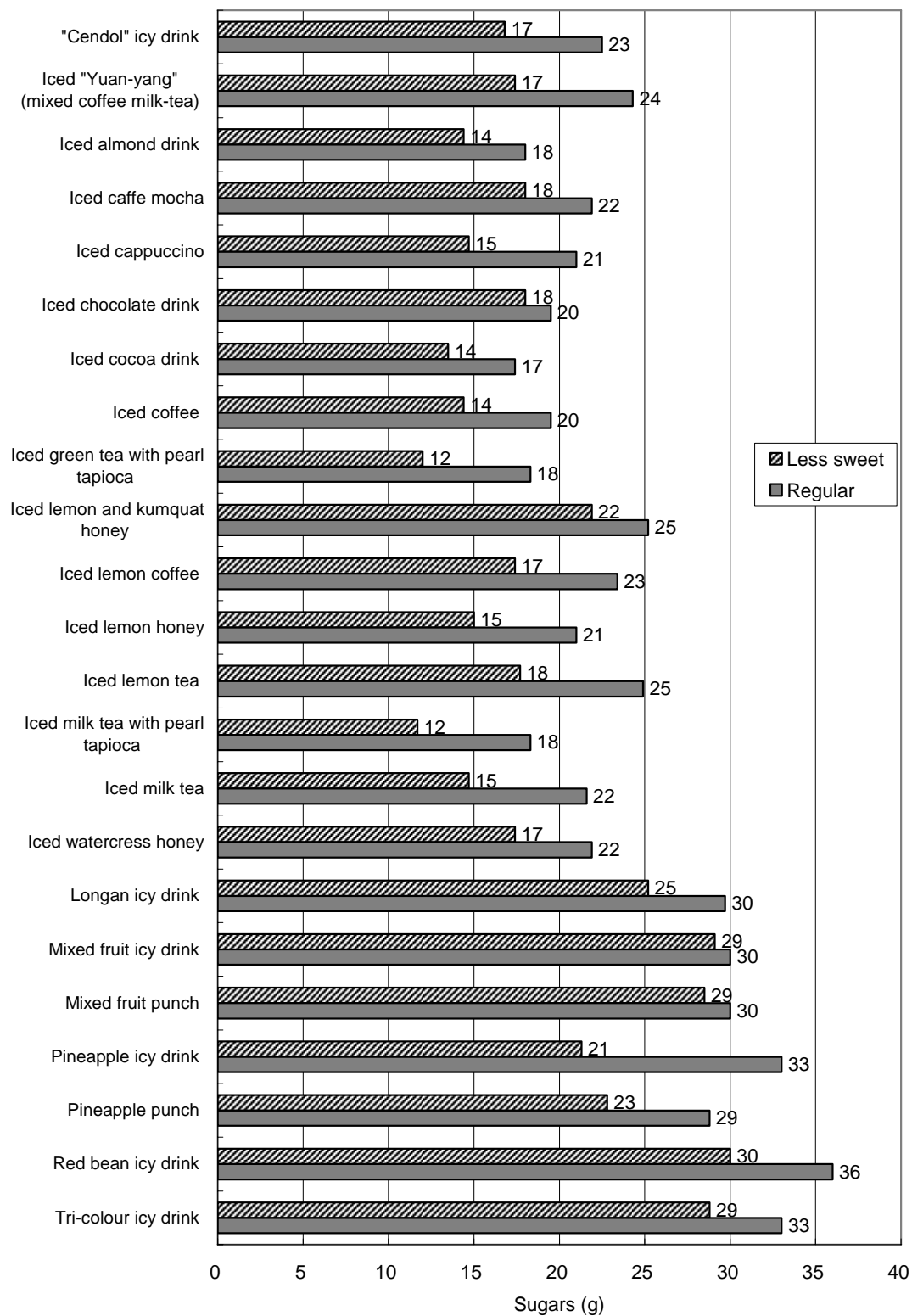


Figure 6. Comparison of sugars content of different versions of cold beverages (g/300 ml)

Tea and coffee

32. Tea and coffee type beverages are commonly consumed in Hong Kong. They are available in different varieties. Tea and coffee are often flavoured with milk, sugar, and/or other ingredients upon consumption. The nutrient contents of different varieties of tea and coffee type beverages were compared in Figure 7.

33. It was found that tea and coffee beverages without added milk and sugar, such as Espresso and Lemon tea were lower in energy and sugars, and they only contained trace amount of total fat. On the other hand, tea and coffee with milk or cream as one of the ingredients, such as Milk tea and Cappuccino, contained total fat of 5.3g to 6.7g per cup (240ml), and generally provided more energy than tea and coffee varieties without added milk. Adding sugar to tea and coffee increased the energy and sugars content of the beverages. The more sugar added, the higher the sugars and energy contents.

WHO/FAO recommendation

34. WHO and FAO recommended intake of free sugars should be limited to less than 10% of total energy intake. For example, an individual with daily intake of 2000 kcal energy should limit the free sugars intake to less than 50g per day.

35. In this study, sugars being analysed included free sugars (such as granulated sugar and syrups added to foods, sugars naturally present in fruit juices and honey) and non-free sugars (such as sugar naturally present in fruits and milk). Assuming all sugars in the non-prepackaged beverages sampled were free sugars, consuming two cups of the beverages listed in Table 9 would contribute to an intake of close to or over 50g of free sugars. This contributes to about 200 kcal energy intake. In other words, such energy intake from consuming 2 extra cups of such beverages every day could lead to an increase of about 9.5 kg body weight in a year.

36. Some other beverages also have sugars content similar to the beverages listed in Table 9. All beverages and their different versions studied were ranked by their sugars content per cup (240 ml for hot beverages, 300 ml for cold beverages), and those beverages belong to the top 25% of the list were shown in Table 10. The beverage with the highest sugars content per cup was Red bean icy drink (Regular). A single cup of the beverage (300 ml) provided almost 9 teaspoons sugar. This is similar to the sugars content in a can of regular cola. Among the list of beverages

with relative high sugars content, some belonged to less sugar “less sweet” version, such as Red bean icy drink (Less sweet) (紅豆冰(少甜)), Mixed fruit icy drink (Less sweet) (什果冰(少甜)) and Tri-colour icy drink (Less sweet) (三色冰(少甜)). The beverages belong to the bottom 25% of the list were also shown in Table 11 for comparison.

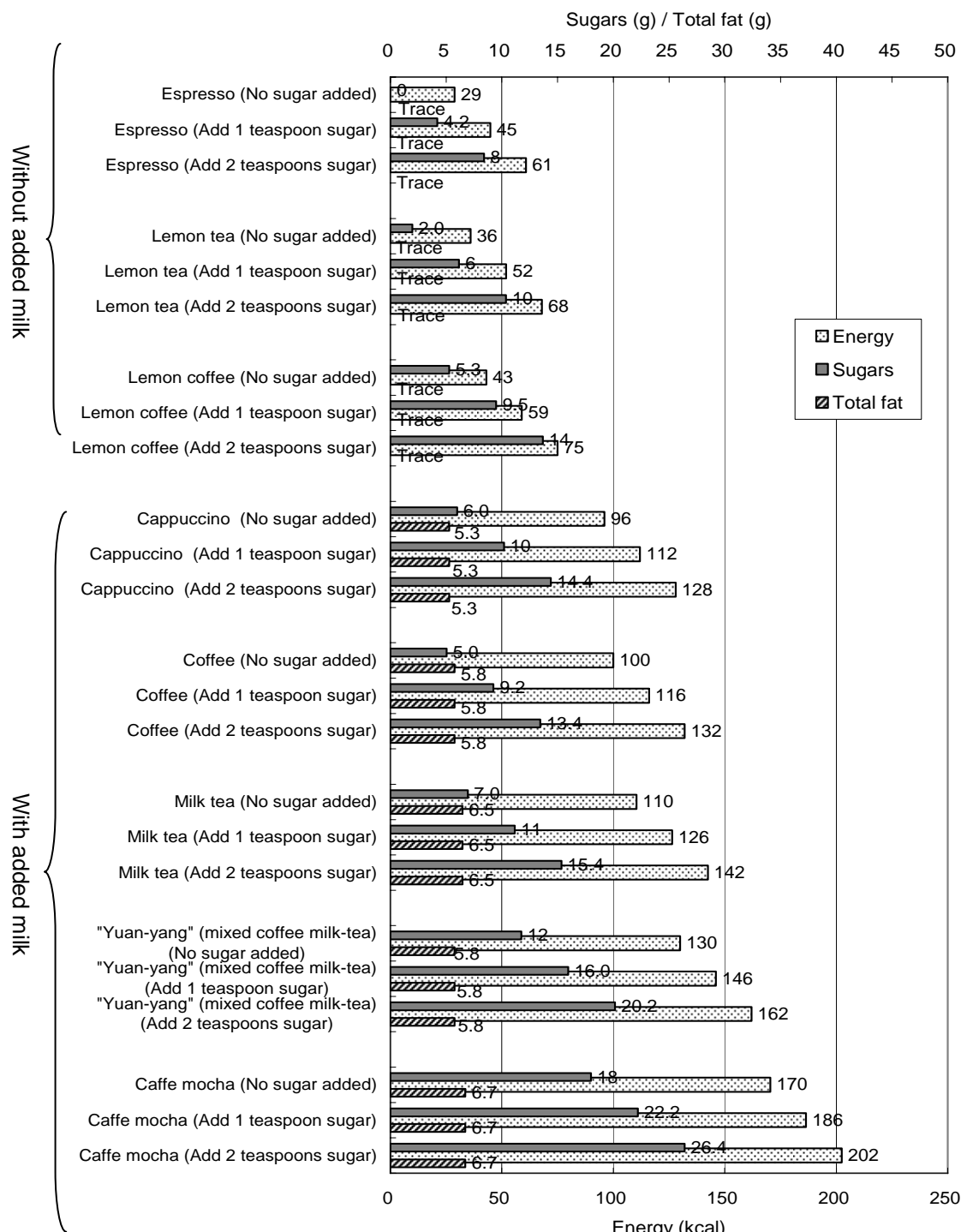


Figure 7. Comparison of sugars and total fat contents of tea and coffee type beverages (g/240 ml)

Table 9. Examples of beverages with high sugars content (per cup)

Beverage		Energy (kcal)	Sugars (g)
Hot beverages (per 240 ml cup)			
Sour plum drink	酸梅湯	120	26
Caffe mocha (No sugar added)	朱古力咖啡 (不加糖)	202	26
Cold beverages (per 300 ml cup)			
Red bean icy drink (Regular)	紅豆冰 (普通)	260	36
Tri-colour icy drink (Regular)	三色冰 (普通)	250	33
Pineapple icy drink (Regular)	菠蘿冰 (普通)	160	33
Red bean icy drink (Less sweet)	紅豆冰 (少甜)	240	30
Mixed fruit punch (Regular)	什果賓治 (普通)	150	30
Mixed fruit icy drink (Regular)	什果冰 (普通)	170	30
Longan icy drink (Regular)	龍眼冰 (普通)	160	30
Pineapple punch (Regular)	菠蘿賓治 (普通)	140	29
Mixed fruit icy drink (Less sweet)	什果冰 (少甜)	160	29
Mixed fruit punch (Less sweet)	什果賓治 (少甜)	140	29
Tri-colour icy drink (Less sweet)	三色冰 (少甜)	230	29
Longan icy drink (Regular)	龍眼冰 (少甜)	140	25
Iced lemon tea (Regular)	凍檸檬茶(普通)	140	25
Iced lemon and kumquat honey (Regular)	凍檸檬金桔蜜(普通)	140	25

Table 10. Beverages with higher sugars content in one cup (above 75th percentile)

Sample		Energy (kcal)	Sugars (g)
Red bean icy drink (Regular)	紅豆冰 (普通)	260	36
Pineapple icy drink (Regular)	菠蘿冰 (普通)	160	33
Tri-colour icy drink (Regular)	三色冰 (普通)	250	33
Red bean icy drink (Less sweet)	紅豆冰 (少甜)	240	30
Mixed fruit punch (Regular)	什果賓治 (普通)	150	30
Mixed fruit icy drink (Regular)	什果冰 (普通)	170	30
Longan icy drink (Regular)	龍眼冰 (普通)	160	30
Mixed fruit icy drink (Less sweet)	什果冰 (少甜)	160	29
Pineapple punch (Regular)	菠蘿賓治 (普通)	140	29
Tri-colour icy drink (Less sweet)	三色冰 (少甜)	230	29
Mixed fruit punch (Less sweet)	什果賓治 (少甜)	140	29
Caffe mocha (Add 2 teaspoons sugar)	朱古力咖啡(加兩茶匙糖)	202	26.4
Sour plum drink	酸梅湯	120	26
Longan icy drink (Regular)	龍眼冰 (少甜)	140	25
Iced lemon and kumquat honey (Regular)	凍檸檬金桔蜜(普通)	140	25
Iced lemon tea (Regular)	凍檸檬茶(普通)	140	25
Iced "Yuan-yang"(Mixed coffee milk-tea) (Regular)	凍鴛鴦 (普通)	160	24
Citron tea	柚子茶	110	24
Iced lemon coffee (Regular)	凍檸檬咖啡(普通)	110	23
Lemon and kumquat honey	檸檬金桔蜜	130	23
Pineapple punch (Less sweet)	菠蘿賓治 (少甜)	110	23
Sweetened soybean milk (Cold drink)	甜豆漿(凍飲)	165	23
"Cendol" icy drink (Regular)	珍多冰 (普通)	240	23
Iced lemon cola	凍檸樂	99	23
Hot chocolate drink (Add 2 teaspoons sugar)	朱古力飲品(加兩茶匙糖)	172	22.3

* For cold beverages, 1 cup = 300 ml; For hot beverages, 1 cup = 240 ml

Table 11. Beverages with lower sugars content in one cup (below 25th percentile)

Sample		Energy (kcal)	Sugars (g)
Iced green tea with pearl tapioca (Less sweet)	凍珍珠綠茶(少甜)	90	12
"Yuan-yang" (mixed coffee milk-tea)(No sugar added)	鴛鴦 (不加糖)	130	12
Iced milk tea with pearl tapioca (Less sweet)	凍珍珠奶茶(少甜)	170	12
Milk tea (Add 1 teaspoon sugar)	奶茶 (加一茶匙糖)	126	11.2
Green tea with pearl tapioca (No sugar added)	珍珠綠茶 (不加糖)	89	11
Lemon tea (Add 2 teaspoons sugar)	檸檬茶 (加兩茶匙糖)	68	10.4
Cappuccino (Add 1 teaspoon sugar)	泡沫咖啡(加一茶匙糖)	112	10.2
Soybean milk (Add 2 teaspoons sugar)	豆漿 (加兩茶匙糖)	99	10.2
Lemon coffee (Add 1 teaspoon sugar)	檸檬咖啡(加一茶匙糖)	59	9.5
Coffee (Add 1 teaspoon sugar)	咖啡 (加一茶匙糖)	116	9.2
Almond drink (No sugar added)	杏仁霜 (不加糖)	110	9.1
Cocoa drink (No sugar added)	哈咕 (不加糖)	100	8.6
Espresso (Add 2 teaspoons sugar)	特濃咖啡(加兩茶匙糖)	61	8.4
Milk tea (No sugar added)	奶茶 (不加糖)	110	7.0
Lemon tea (Add 1 teaspoon sugar)	檸檬茶 (加一茶匙糖)	52	6.2
Cappuccino (No sugar added)	泡沫咖啡 (不加糖)	96	6.0
Soybean milk (Add 1 teaspoon sugar)	豆漿 (加一茶匙糖)	83	6.0
Lemon coffee (No sugar added)	檸檬咖啡 (不加糖)	43	5.3
Coffee (No sugar added)	咖啡 (不加糖)	100	5.0
Espresso (Add 1 teaspoon sugar)	特濃咖啡(加一茶匙糖)	45	4.2
Lemon tea (No sugar added)	檸檬茶 (不加糖)	36	2.0
Soybean milk (No sugar added)	豆漿 (不加糖)	67	1.8
Espresso (No sugar added)	特濃咖啡 (不加糖)	29	0

* For cold beverages, 1 cup = 300 ml; For hot beverages, 1 cup = 240 ml

Limitations of the study

37. A large variety of non-prepackaged beverages is available in Hong Kong. This study included some of the non-prepackaged beverages commonly found on the market. There were still a number of non-prepackaged beverages not being covered.

38. There was variability in the nutrient composition of foods. The nutrient

content of non-prepackaged beverages varies as they may have different ingredients and recipe formulations. Their nutrient contents are also influenced by the variation in nutrient composition of the ingredients.

39. The nutrient composition of non-prepackaged beverages was evaluated in this study. Owing to the lack of comprehensive food consumption data in Hong Kong, the nutrient intake of the whole population and population subgroups from non-prepackaged beverages could not be quantified.

CONCLUSION AND RECOMMENDATIONS

40. This study provided data on the nutrient content of non-prepackaged beverages. The result of the study suggested that energy and sugars contents of non-prepackaged beverages vary, whilst their cholesterol and dietary fibre contents were generally low.

41. For most non-prepackaged beverages, energy mainly came from sugars. Addition of sugar increased the energy and sugars contents of the beverages, whilst less sugar “less sweet” version cold beverages were generally lower in energy and sugars than regular version.

42. Tea and coffee beverages without added sugar and milk were generally lower in energy and sugars, while some non-prepackaged beverages were high in sugars and energy, such as “Icy drinks” (冰類飲品), Caffè Mocha (朱古力咖啡), and Milk tea with pearl tapioca (珍珠奶茶).

Advice to consumers

43. In order to prevent excess intake of energy and sugars from non-prepackaged beverages, patrons could-

- (a) Choose non-prepackaged beverages with lower energy and sugars contents
- (b) Add less sugar to hot beverages; Use teaspoon to measure the amount of sugar to be added to beverages to avoid adding too much sugar without conscious
- (c) Order less sugar “less sweet” cold beverages instead of regular version
- (d) Maintain a balanced diet and limit the consumption of sugary beverages

Advice for the trade

44. Members of the trade are advised to provide non-prepackaged beverages with lower energy and sugars contents to consumers. This could be achieved by-

- (a) Providing sugar or syrup to consumers separately instead of mixing them with the beverage before serve
- (b) Adding less sugar to beverages if they must be pre-sweetened before serving to consumers
- (c) Providing less sugar “less sweet” version beverages to consumers
- (d) If sugar in individual packs is provided to consumers, provide smaller packs. Give consumers a minimal number of sugar packs.

Prepared by Risk Assessment Section

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Food and Environmental Hygiene Department

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REFERENCES

1. Population Health Survey 2003/2004. Hong Kong SAR: Department of Health and Department of Community Medicine, University of Hong Kong.
2. Department of Health. Health facts--Major health behavioural factors. Available at: URL: http://www.healthyhk.gov.hk/phsweb/en/healthy_facts/
3. FAO/WHO. Joint WHO/FAO Expert consultation on diet, nutrition and the prevention of chronic diseases. Geneva : WHO, 2003.
4. U.S. Department of Agriculture, Agricultural Research Service 2004. USDA Nutrient Database for Standard References, Release 19. Nutrient Data Laboratory Home Page. Available at: URL: <http://www.nal.usda.gov/fnic/foodcomp/search/>

Recommendations of WHO and FAO on Nutrient Intakes

In 2003, WHO and FAO updated the technical report entitled “Diet, nutrition and the prevention of chronic diseases”¹. In this report, a series of population nutrient intake goals for preventing diet-related chronic disease was established, and they are presented in Table 1.

Table 1. Ranges of population nutrient intake goals established by FAO/WHO

Total fat	15-30% of total daily energy intake
Saturated fatty acids	< 10% of total daily energy intake
Polyunsaturated fatty acids (PUFAs)	6-10% of total daily energy intake
Trans fatty acids	<1% of total daily energy intake
Monounsaturated fatty acid	By difference #
Total carbohydrate	55-75% of total daily energy intake
Protein	10-15% of total daily energy intake
Cholesterol	< 300 mg/day
Sodium chloride (sodium)	< 5 g/day (< 2 g/day)
Total dietary fibre	>25 g/day

This is calculated as: total fat – (saturated fatty acids + polyunsaturated fatty acids + trans fatty acids)

(Source: FAO/WHO, 2003¹)

The population nutrient intake goals were set up for consideration by national and regional bodies establishing dietary recommendations for the prevention of diet-related chronic diseases. It represents the population average intake that is judged to be consistent with the maintenance of a low prevalence of diet-related diseases in a population.¹ If existing population averages fall outside this range, or trends in intake suggest that the population average will move outside the range, health concerns are likely to arise.

However, no population nutrient intake goal for calcium was established by FAO/WHO in this report. In another report of a joint FAO/WHO expert consultation entitled “Vitamin and mineral requirements in human nutrition”², the data of balanced studies and factors affecting the calcium requirement of human was reviewed. Based on the available data, the experts of FAO/WHO agreed to set the recommended calcium

allowance of 1000 mg/day for adults. The recommended calcium allowances of individuals in developed countries at different stages of life cycle were shown in Table 2.

Table 2 Recommended calcium allowance (daily) of individuals in developed countries established by FAO/WHO

Group	Recommended intake (mg/day)
0-6 months, human breast milk	300
0-6 months, cow milk	400
7-12 months	400
1-3 years	500
4-6 years	600
7-9 years	700
Adolescents, 10-18 years	1300 ¹
Female adults, 19 years to menopause	1000
Female adults, postmenopausal	1300
Male adults, 19-65 years	1000
Male adults, >65 years	1300
Pregnancy (last trimester)	1200
Lactation	1000

¹ Particularly during growth spurt

(Source: FAO, 2004 ²)

Reference for Annex I

1. FAO/WHO. Joint WHO/FAO Expert consultation on diet, nutrition and the prevention of chronic diseases. Geneva: WHO, 2003.
2. FAO/WHO. Vitamin and mineral requirements in human nutrition. 2nd ed. Report of a joint FAO/WHO expert consultation. Rome: FAO, 2004

Non-prepackaged beverages samples collected in this study

01 Almond drink (No sugar added)	杏仁霜 (不加糖)
02 Caffè mocha (No sugar added)	朱古力咖啡 (不加糖)
03 Cappuccino (No sugar added)	泡沫咖啡 (不加糖)
04 "Cendol" icy drink (Less sweet)	珍多冰 (少甜)
05 "Cendol" icy drink (Regular)	珍多冰 (普通)
06 Citron tea	柚子茶
07 Cocoa drink (No sugar added)	哈咕 (不加糖)
08 Coffee (No sugar added)	咖啡 (不加糖)
09 Cogon grass and sugar cane drink	茅根竹蔗水
10 Espresso (No sugar added)	特濃咖啡 (不加糖)
11 "Five flower tea"	五花茶
12 Ginseng honey	花旗參蜜
13 Green tea with pearl tapioca (No sugar added)	珍珠綠茶 (不加糖)
14 Hot chocolate drink (No sugar added)	朱古力飲品 (不加糖)
15 Iced "Yuan-yang" (mixed coffee milk-tea) (Less sweet)	凍鴛鴦 (少甜)
16 Iced "Yuan-yang" (mixed coffee milk-tea) (Regular)	凍鴛鴦 (普通)
17 Iced almond drink (Less sweet)	凍杏仁霜 (少甜)
18 Iced almond drink (Regular)	凍杏仁霜 (普通)
19 Iced caffè mocha (Less sweet)	凍朱古力咖啡 (少甜)
20 Iced caffè mocha (Regular)	凍朱古力咖啡 (普通)
21 Iced cappuccino (Less sweet)	凍泡沫咖啡 (少甜)
22 Iced cappuccino (Regular)	凍泡沫咖啡 (普通)
23 Iced chocolate drink (Less sweet)	凍朱古力飲品 (少甜)
24 Iced chocolate drink (Regular)	凍朱古力飲品 (普通)
25 Iced cocoa drink (Less sweet)	凍哈咕 (少甜)
26 Iced cocoa drink (Regular)	凍哈咕 (普通)
27 Iced coffee (Less sweet)	凍咖啡 (少甜)
28 Iced coffee (Regular)	凍咖啡 (普通)
29 Iced green tea with pearl tapioca (Less sweet)	凍珍珠綠茶 (少甜)
30 Iced green tea with pearl tapioca (Regular)	凍珍珠綠茶 (普通)
31 Iced lemon and kumquat honey (Less sweet)	凍檸檬金桔蜜 (少甜)
32 Iced lemon and kumquat honey (Regular)	凍檸檬金桔蜜 (普通)
33 Iced lemon coffee (Less sweet)	凍檸檬咖啡 (少甜)
34 Iced lemon coffee (Regular)	凍檸檬咖啡 (普通)
35 Iced lemon cola	凍檸樂
36 Iced lemon honey (Less sweet)	凍檸蜜 (少甜)

Non-prepackaged beverages samples collected in this study (continue)

37	Iced lemon honey(Regular)	凍檸檬蜜(普通)
38	Iced lemon soda	凍檸檬梳打
39	Iced lemon tea (Less sweet)	凍檸檬茶(少甜)
40	Iced lemon tea (Regular)	凍檸檬茶(普通)
41	Iced milk tea (Less sweet)	凍奶茶(少甜)
42	Iced milk tea with pearl tapioca (Less sweet)	凍珍珠奶茶(少甜)
43	Iced milk tea with pearl tapioca (Regular)	凍珍珠奶茶(普通)
44	Iced milk tea(Regular)	凍奶茶(普通)
45	Iced salted lemon soda	凍鹹檸檬梳打
46	Iced watercress honey (Less sweet)	凍西洋菜蜜(少甜)
47	Iced watercress honey(Regular)	凍西洋菜蜜(普通)
48	Lemon and kumquat honey	檸檬金桔蜜
49	Lemon coffee (No sugar added)	檸檬咖啡(不加糖)
50	Lemon cola	檸檬(熱)
51	Lemon honey	檸檬蜜
52	Lemon tea (No sugar added)	檸檬茶(不加糖)
53	Longan icy drink (Regular)	龍眼冰(普通)
54	Longan icy drink (Regular)	龍眼冰(少甜)
55	Milk tea (No sugar added)	奶茶(不加糖)
56	Milk tea with pearl tapioca (No sugar added)	珍珠奶茶(不加糖)
57	Mixed fruit icy drink (Less sweet)	什果冰(少甜)
58	Mixed fruit icy drink (Regular)	什果冰(普通)
59	Mixed fruit punch (Less sweet)	什果賓治(少甜)
60	Mixed fruit punch (Regular)	什果賓治(普通)
61	Pineapple icy drink (Less sweet)	菠蘿冰(少甜)
62	Pineapple icy drink (Regular)	菠蘿冰(普通)
63	Pineapple punch (Less sweet)	菠蘿賓治(少甜)
64	Pineapple punch (Regular)	菠蘿賓治(普通)
65	Red bean icy drink (Less sweet)	紅豆冰(少甜)
66	Red bean icy drink (Regular)	紅豆冰(普通)
67	Sour plum drink	酸梅湯
68	Soybean milk (No sugar added)	豆漿(不加糖)
69	Sweetened soybean milk (cold drink)	甜豆漿(凍飲)
70	Tri-colour icy drink (Less sweet)	三色冰(少甜)
71	Tri-colour icy drink (Regular)	三色冰(普通)
72	Watercress honey	西洋菜蜜
73	"Yuan-yang" (mixed coffee milk-tea)	鴛鴦(不加糖)

Testing Methods for Determining Nutrient Contents in Foods

Single-laboratory validated test methods based on the following references:

Nutrient parameter	Reference
Cholesterol	AOAC 994.10
Dietary fibre	AOAC 985.29
Total nitrogen (for protein)	AOAC 992.15 and AOAC 992.23
Saturated fatty acids	AOAC 996.06
Total fat	AOAC 922.06
Moisture	International Standard ISO 1442:1997
Total ash	International Standard ISO 936:1998
Sugars	AOAC 977.20, AOAC 980.13 and AOAC 982.14
Nutritional elements	Acid digestion followed by ICP-OES* determination

Note:

All AOAC Official Methods quoted are referred to AOAC Official Method, 17th edition, 2000 AOAC *INTERNATIONAL*.

* ICP-OES refers to inductively coupled plasma – optical emission spectrometry

Nutrient parameters by calculation

- Energy** is calculated as the sum of contents of total fat, protein and carbohydrate multiplying their corresponding conversion factors (i.e. carbohydrate: 4kcal/g, protein: 4kcal/g, fat: 9kcal/g).
- Total carbohydrate** is calculated by subtracting the sum of moisture, ash, total fat and protein from the total weight of the food sample.
- Protein** is calculated by multiplying the content of total nitrogen in the food sample with the conversion factor of 6.25.
- Saturated fat** is the sum of 13 saturated fatty acids including C_{4:0}, C_{6:0}, C_{8:0}, C_{10:0}, C_{12:0}, C_{14:0}, C_{15:0}, C_{16:0}, C_{17:0}, C_{18:0}, C_{20:0}, C_{22:0} and C_{24:0}.
- Sugar** is the sum of individual sugars including fructose, glucose, sucrose, maltose and lactose

The definition of “trace”

Nutrient parameter	Range of “trace” per 100 g or 100 ml
Protein	0.1 – 0.3 g
Total fat	0.1 – 0.3 g
Saturated fat	
C4:0	0.0005 – 0.002 g
C6:0	0.004 – 0.01 g
C8:0	0.005 – 0.02 g
C10:0	0.002 – 0.006 g
C12:0	0.001 – 0.003 g
C14:0	0.002 – 0.006 g
C15:0	0.002 – 0.006 g
C16:0	0.002 – 0.005 g
C17:0	0.002 – 0.005 g
C18:0	0.002 – 0.006 g
C20:0	0.001 – 0.004 g
C22:0	0.002 – 0.007 g
C24:0	0.002 – 0.008 g
Dietary fibre	0.4 – 1 g
Cholesterol	0.02 – 0.06 mg
Sodium	2 – 5 mg
Calcium	0.4 – 1 mg

Nutrient content of non-prepackaged beverages sampled (per 100ml)

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
Cold beverage											
"Cendol" icy drink (Less sweet)	珍多冰 (少甜)	72	0	9.4	5.6	0	3.8	3.1	0.25	6.8	13
"Cendol" icy drink (Regular)	珍多冰 (普通)	80	0	11	7.5	0	3.9	3.1	0.21	7.0	12
Iced "Yuan-yang" (mixed coffee milk-tea) (Less sweet)	凍鴛鴦 (少甜)	40	1.3	6.1	5.8	Trace	1.1	0.58	3.7	34	14
Iced "Yuan-yang" (mixed coffee milk-tea) (Regular)	凍鴛鴦 (普通)	52	1.5	8.7	8.1	0	1.3	0.64	4.1	37	16
Iced almond drink (Less sweet)	凍杏仁霜(少甜)	43	1.1	6.8	4.8	0	1.3	0.74	2.4	32	16
Iced almond drink (Regular)	凍杏仁霜(普通)	51	1.1	8.9	6.0	0	1.3	0.78	2.5	33	17
Iced caffe mocha(Less sweet)	凍朱古力咖啡 (少甜)	55	1.4	7.3	6.0	Trace	2.3	1.3	4.3	40	26
Iced caffe mocha(Regular)	凍朱古力咖啡 (普通)	61	1.5	8.7	7.3	Trace	2.2	1.2	4.1	43	26
Iced cappuccino(Less sweet)	凍泡沫咖啡 (少甜)	41	1.1	5.4	4.9	0	1.7	0.66	3.8	36	17
Iced cappuccino(Regular)	凍泡沫咖啡 (普通)	50	1.2	7.6	7.0	0	1.7	0.7	3.7	39	17
Iced chocolate drink (Less sweet)	凍朱古力飲品 (少甜)	46	1.2	7.2	6.0	Trace	1.4	0.87	2.6	30	25
Iced chocolate drink (Regular)	凍朱古力飲品 (普通)	55	1.1	9.2	6.5	Trace	1.5	0.95	2.5	29	27
Iced cocoa drink (Less sweet)	凍哈咕 (少甜)	41	1.7	4.6	4.5	Trace	1.7	1.0	4.4	40	19
Iced cocoa drink (Regular)	凍哈咕 (普通)	47	1.7	6.1	5.8	Trace	1.8	1.0	4.3	39	19
Iced coffee (Less sweet)	凍咖啡 (少甜)	39	1.0	6.0	4.8	Trace	1.2	0.64	2.8	29	16
Iced coffee (Regular)	凍咖啡 (普通)	48	1.0	8.2	6.5	0	1.3	0.5	2.8	30	16
Iced green tea with pearl tapioca (Less sweet)	凍珍珠綠茶(少甜)	30	0	7.3	4.0	0	0	0	0	1.5	0
Iced green tea with pearl tapioca (Regular)	凍珍珠綠茶(普通)	41	0	10	6.1	0	0	0	0	1.6	0
Iced lemon and kumquat honey (Less sweet)	凍檸檬金桔蜜(少甜)	40	0.3	9.2	7.3	0	Trace	0	0	4.6	110
Iced lemon and kumquat honey (Regular)	凍檸檬金桔蜜(普通)	47	Trace	11	8.4	0	Trace	0	0	4.9	110
Iced lemon coffee (Less sweet)	凍檸檬咖啡(少甜)	29	0.3	6.9	5.8	0	0	0	0	6.3	0
Iced lemon coffee (Regular)	凍檸檬咖啡(普通)	38	0.3	8.9	7.8	0	0	0	0	5.5	0
Iced lemon cola	凍檸檬	33	0	8.0	7.5	0	0	0	0	3.4	Trace

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
Iced lemon honey (Less sweet)	凍檸蜜(少甜)	24	0	5.4	5.0	0	Trace	0	0	6.4	Trace
Iced lemon honey(Regular)	凍檸蜜(普通)	32	0	7.5	7.0	0	Trace	0	0	6.9	Trace
Iced lemon soda	凍檸檬梳打	23	0	5.5	5.3	0	0	0	0	3.4	8.8
Iced lemon tea (Less sweet)	凍檸檬茶(少甜)	29	0	6.7	5.9	0	Trace	0	0	4.6	0
Iced lemon tea (Regular)	凍檸檬茶(普通)	48	0	11	8.3	0	0.3	0	0	4.5	0
Iced milk tea (Less sweet)	凍奶茶(少甜)	34	0.9	5.5	4.9	0	0.9	0.38	2.9	30	16
Iced milk tea with pearl tapioca (Less sweet)	凍珍珠奶茶(少甜)	57	Trace	9.0	3.9	0	2.3	2.0	Trace	1.6	20
Iced milk tea with pearl tapioca (Regular)	凍珍珠奶茶(普通)	68	Trace	12	6.1	Trace	2.2	1.9	Trace	1.6	20
Iced milk tea(Regular)	凍奶茶(普通)	44	1.0	8.5	7.2	0	0.7	0.28	3	31	16
Iced salted lemon soda	凍鹹檸檬梳打	24	0	5.9	5.3	0	0	0	0	3.8	240
Iced watercress honey (Less sweet)	凍西洋菜蜜(少甜)	26	Trace	6.2	5.8	0	0	0	0	3.1	10
Iced watercress honey(Regular)	凍西洋菜蜜(普通)	32	0.3	7.6	7.3	0	0	0	0	3.6	12
Longan icy drink (Regular)	龍眼冰(普通)	54	Trace	11	9.9	0	0.8	0.16	0	5.3	5.0
Longan icy drink (Regular)	龍眼冰(少甜)	48	Trace	9.8	8.4	0	0.9	0.31	0	6.3	Trace
Mixed fruit icy drink (Less sweet)	什果冰(少甜)	53	0	11	9.7	0	0.8	0.35	0	6.4	Trace
Mixed fruit icy drink (Regular)	什果冰(普通)	56	0	12	10	0	0.8	0.31	0	6.1	Trace
Mixed fruit punch (Less sweet)	什果賓治(少甜)	46	0	11	9.5	0	0.3	0.003	0	5.3	Trace
Mixed fruit punch (Regular)	什果賓治(普通)	49	Trace	12	10	0	0.3	0.003	0	5.5	Trace
Pineapple icy drink (Less sweet)	菠蘿冰(少甜)	41	0	9.2	7.1	0	0.4	0.004	0	3.4	0
Pineapple icy drink (Regular)	菠蘿冰(普通)	53	0	12	11	0	0.4	0.003	0	3.6	0
Pineapple punch (Less sweet)	菠蘿賓治(少甜)	38	0	8.4	7.6	0	0.4	0.003	0	4.2	Trace
Pineapple punch (Regular)	菠蘿賓治(普通)	46	Trace	10	9.6	0	0.5	0.003	0	4.4	Trace
Red bean icy drink (Less sweet)	紅豆冰(少甜)	79	2.5	15	10	2.2	1.1	0.49	1.9	31	10
Red bean icy drink (Regular)	紅豆冰(普通)	87	2.6	16	12	2.0	1.2	0.54	2.0	34	11
Sweetened soybean milk (cold drink)	甜豆漿(凍飲)	55	2.1	8.4	7.6	0	1.5	0.19	0	9.0	0
Tri-colour icy drink (Less sweet)	三色冰(少甜)	78	1.0	12	9.6	1.0	2.9	2.1	0.06	5.9	7.0
Tri-colour icy drink (Regular)	三色冰(普通)	83	1.0	13	11	1.2	3.0	2.3	0.1	6.0	8.0

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
Hot beverage											
Almond drink (No sugar added)	杏仁霜 (不加糖)	46	1.4	6.3	3.8	0	1.7	1.0	3.4	46	24
Caffe mocha (No sugar added)	朱古力咖啡 (不加糖)	71	2.2	9.1	7.5	1.1	2.8	1.6	6.0	66	43
Cappuccino (No sugar added)	泡沫咖啡 (不加糖)	40	2.1	3.0	2.5	Trace	2.2	1.2	6.9	68	27
Citron tea	柚子茶	47	0	11	10	0	0	0	0	5.2	20
Cocoa drink (No sugar added)	咯咕 (不加糖)	43	2.1	3.7	3.6	1.3	2.2	1.4	6.2	55	26
Coffee (No sugar added)	咖啡 (不加糖)	43	2.0	3.3	2.1	Trace	2.4	1.4	6.3	62	33
Cogon grass and sugar cane drink	茅根竹蔗水	25	0	6.1	5.7	0	0	0	0	3.8	Trace
Espresso (No sugar added)	特濃咖啡 (不加糖)	12	0.8	1.7	0	Trace	Trace	0.047	0	4.7	0
"Five flower tea"	五花茶	30	0	7.0	6.5	0	Trace	0	0	4.6	0
Ginseng honey	花旗參蜜	37	0	8.6	8.1	0	Trace	0	0	2.7	0
Green tea with pearl tapioca (No sugar added)	珍珠綠茶 (不加糖)	37	0	9.2	4.4	0	0	0	0	2.5	Trace
Hot chocolate drink (No sugar added)	朱古力飲品 (不加糖)	57	1.7	8.1	5.8	1.1	2.0	1.2	4.1	47	38
Lemon and kumquat honey	檸檬金桔蜜	54	Trace	13	9.5	0	Trace	0	0	7.7	140
Lemon coffee (No sugar added)	檸檬咖啡 (不加糖)	18	0.4	3.8	2.2	0	Trace	0	0	9.8	0
Lemon cola	檸樂 (熱)	42	Trace	10	9.2	0	Trace	0	0	7.8	Trace
Lemon honey	檸蜜	40	0	9.1	7.7	0	0.4	0	0	9.8	Trace
Lemon tea (No sugar added)	檸檬茶 (不加糖)	15	Trace	3.1	0.82	0	Trace	0	0	8.9	0
Milk tea (No sugar added)	奶茶 (不加糖)	46	2.3	3.2	2.9	1.1	2.7	1.4	7.1	77	40
Milk tea with pearl tapioca (No sugar added)	珍珠奶茶 (不加糖)	75	0.3	12	5.3	Trace	2.8	2.5	0.07	2.6	25
Sour plum drink	酸梅湯	51	0	12	11	0	Trace	0	0	6.0	0
Soybean milk (No sugar added)	豆漿 (不加糖)	28	2.4	0.9	0.74	0	1.6	0.23	0	9.7	0
Watercress honey	西洋菜蜜	36	Trace	8.6	8.1	0	0	0	0	4.5	13
"Yuan-yang" (mixed coffee milk-tea)	鴛鴦 (不加糖)	53	2.5	5.3	4.9	Trace	2.4	1.5	8.3	70	31

Nutrient content of non-prepackaged beverages sampled (per unit)

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
<u>Cold beverage (1 cup = 300 ml)</u>											
"Cendol" icy drink (Less sweet)	珍多冰 (少甜)	220	0	28	17	0	11	9.3	0.75	20	39
"Cendol" icy drink (Regular)	珍多冰 (普通)	240	0	33	23	0	12	9.3	0.63	21	36
Iced "Yuan-yang" (mixed coffee milk-tea) (Less sweet)	凍鴛鴦 (少甜)	120	3.9	18	17	Trace	3.3	1.7	11	100	42
Iced "Yuan-yang" (mixed coffee milk-tea) (Regular)	凍鴛鴦 (普通)	160	4.5	26	24	0	3.9	1.9	12	110	48
Iced almond drink (Less sweet)	凍杏仁霜(少甜)	130	3.3	20	14	0	3.9	2.2	7.2	96	48
Iced almond drink (Regular)	凍杏仁霜(普通)	150	3.3	27	18	0	3.9	2.3	7.5	99	51
Iced caffè mocha(Less sweet)	凍朱古力咖啡 (少甜)	170	4.2	22	18	Trace	6.9	3.9	13	120	78
Iced caffè mocha(Regular)	凍朱古力咖啡 (普通)	180	4.5	26	22	Trace	6.6	3.6	12	130	78
Iced cappuccino(Less sweet)	凍泡沫咖啡 (少甜)	120	3.3	16	15	0	5.1	2.0	11	110	51
Iced cappuccino(Regular)	凍泡沫咖啡 (普通)	150	3.6	23	21	0	5.1	2.1	11	120	51
Iced chocolate drink (Less sweet)	凍朱古力飲品 (少甜)	140	3.6	22	18	Trace	4.2	2.6	7.8	90	75
Iced chocolate drink (Regular)	凍朱古力飲品 (普通)	170	3.3	28	20	Trace	4.5	2.9	7.5	87	81
Iced cocoa drink (Less sweet)	凍哈咕 (少甜)	120	5.1	14	14	Trace	5.1	3.0	13	120	57
Iced cocoa drink (Regular)	凍哈咕 (普通)	140	5.1	18	17	Trace	5.4	3.0	13	120	57
Iced coffee (Less sweet)	凍咖啡 (少甜)	120	3.0	18	14	Trace	3.6	1.9	8.4	87	48
Iced coffee (Regular)	凍咖啡 (普通)	140	3.0	25	20	0	3.9	1.5	8.4	90	48
Iced green tea with pearl tapioca (Less sweet)	凍珍珠綠茶(少甜)	90	0	22	12	0	0	0	0	4.5	0
Iced green tea with pearl tapioca (Regular)	凍珍珠綠茶(普通)	120	0	30	18	0	0	0	0	4.8	0
Iced lemon and kumquat honey (Less sweet)	凍檸檬金桔蜜(少甜)	120	0.9	28	22	0	Trace	0	0	14	330
Iced lemon and kumquat honey (Regular)	凍檸檬金桔蜜(普通)	140	Trace	33	25	0	Trace	0	0	15	330
Iced lemon coffee (Less sweet)	凍檸檬咖啡(少甜)	87	0.9	21	17	0	0	0	0	19	0
Iced lemon coffee (Regular)	凍檸檬咖啡(普通)	110	0.9	27	23	0	0	0	0	17	0
Iced lemon cola	凍檸檬	99	0	24	23	0	0	0	0	10	Trace

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
Iced lemon honey (Less sweet)	凍檸蜜(少甜)	70	0	16	15	0	Trace	0	0	19	Trace
Iced lemon honey(Regular)	凍檸蜜(普通)	100	0	23	21	0	Trace	0	0	21	Trace
Iced lemon soda	凍檸檬梳打	69	0	17	16	0	0	0	0	10	26
Iced lemon tea (Less sweet)	凍檸檬茶(少甜)	90	0	20	18	0	Trace	0	0	14	0
Iced lemon tea (Regular)	凍檸檬茶(普通)	140	0	33	25	0	0.9	0	0	14	0
Iced milk tea (Less sweet)	凍奶茶(少甜)	100	2.7	17	15	0	2.7	1.1	8.7	90	48
Iced milk tea with pearl tapioca (Less sweet)	凍珍珠奶茶(少甜)	170	Trace	27	12	0	6.9	6.0	Trace	4.8	60
Iced milk tea with pearl tapioca (Regular)	凍珍珠奶茶(普通)	200	Trace	36	18	Trace	6.6	5.7	Trace	4.8	60
Iced milk tea(Regular)	凍奶茶(普通)	130	3.0	26	22	0	2.1	0.84	9	93	48
Iced salted lemon soda	凍鹹檸檬梳打	72	0	18	16	0	0	0	0	11	720
Iced watercress honey (Less sweet)	凍西洋菜蜜(少甜)	78	Trace	19	17	0	0	0	0	9.0	30
Iced watercress honey(Regular)	凍西洋菜蜜(普通)	96	1.0	23	22	0	0	0	0	11	36
Longan icy drink (Regular)	龍眼冰(普通)	160	Trace	33	30	0	2.4	0.48	0	16	15
Longan icy drink (Regular)	龍眼冰(少甜)	140	Trace	29	25	0	2.7	0.93	0	19	Trace
Mixed fruit icy drink (Less sweet)	什果冰(少甜)	160	0	33	29	0	2.4	1.1	0	19	Trace
Mixed fruit icy drink (Regular)	什果冰(普通)	170	0	36	30	0	2.4	0.93	0	18	Trace
Mixed fruit punch (Less sweet)	什果賓治(少甜)	140	0	33	29	0	0.9	0.009	0	16	Trace
Mixed fruit punch (Regular)	什果賓治(普通)	150	Trace	36	30	0	0.9	0.009	0	17	Trace
Pineapple icy drink (Less sweet)	菠蘿冰(少甜)	120	0	28	21	0	1.2	0.012	0	10	0
Pineapple icy drink (Regular)	菠蘿冰(普通)	160	0	36	33	0	1.2	0.009	0	11	0
Pineapple punch (Less sweet)	菠蘿賓治(少甜)	110	0	25	23	0	1.2	0.009	0	13	Trace
Pineapple punch (Regular)	菠蘿賓治(普通)	140	Trace	30	29	0	1.5	0.009	0	13	Trace
Red bean icy drink (Less sweet)	紅豆冰(少甜)	240	7.5	45	30	6.6	3.3	1.5	5.7	93	30
Red bean icy drink (Regular)	紅豆冰(普通)	260	7.8	48	36	6.0	3.6	1.6	6.0	100	33
Sweetened soybean milk (cold drink)	甜豆漿(凍飲)	165	6.3	25	23	0	4.5	0.57	0	27	0
Tri-colour icy drink (Less sweet)	三色冰(少甜)	230	3.0	36	29	3.0	8.7	6.3	0.18	18	21
Tri-colour icy drink (Regular)	三色冰(普通)	250	3.0	39	33	3.6	9.0	6.9	0.3	18	24

Non-prepackaged beverage		Energy (kcal)	Protein (g)	Available carbo- hydrate (g)	Sugar (g)	Total Dietary fiber (g)	Total fat (g)	Saturated fat (g)	Cholesterol (mg)	Calcium (mg)	Sodium (mg)
Hot beverage (1 cup = 240 ml)											
Almond drink (No sugar added)	杏仁霜 (不加糖)	110	3.4	15	9.1	0	4.1	2.4	8.2	110	58
Caffe mocha (No sugar added)	朱古力咖啡 (不加糖)	170	5.3	22	18	2.6	6.7	3.8	15	160	100
Cappuccino (No sugar added)	泡沫咖啡 (不加糖)	96	5.0	7.2	6.0	Trace	5.3	2.9	17	160	65
Citron tea	柚子茶	110	0	26	24	0	0	0	0	12	48
Cocoa drink (No sugar added)	哈咕 (不加糖)	100	5.0	8.9	8.6	3.1	5.3	3.4	15	130	62
Coffee (No sugar added)	咖啡 (不加糖)	100	4.8	7.9	5.0	Trace	5.8	3.4	15	150	79
Cogon grass and sugar cane drink	茅根竹蔗水	60	0	15	14	0	0	0	0	9.1	Trace
Espresso (No sugar added)	特濃咖啡 (不加糖)	29	1.9	4.1	0	Trace	Trace	0.11	0	110	0
"Five flower tea"	五花茶	72	0	17	16	0	Trace	0	0	11	0
Ginseng honey	花旗參蜜	89	0	21	19	0	Trace	0	0	6.5	0
Green tea with pearl tapioca (No sugar added)	珍珠綠茶 (不加糖)	89	0	22	11	0	0	0	0	6.0	Trace
Hot chocolate drink (No sugar added)	朱古力飲品 (不加糖)	140	4.1	19	14	2.6	4.8	2.9	9.8	110	91
Lemon and kumquat honey	檸檬金桔蜜	130	Trace	31	23	0	Trace	0	0	18	330
Lemon coffee (No sugar added)	檸檬咖啡 (不加糖)	43	1.1	9.1	5.3	0	Trace	0	0	24	0
Lemon cola	檸樂 (熱)	100	Trace	24	22	0	Trace	0	0	19	0
Lemon honey	檸蜜	96	0	22	18	0	1.0	0	0	24	Trace
Lemon tea (No sugar added)	檸檬茶 (不加糖)	36	Trace	7.4	2.0	0	Trace	0	0	21	0
Milk tea (No sugar added)	奶茶 (不加糖)	110	5.5	7.7	7.0	2.6	6.5	3.4	17	190	96
Milk tea with pearl tapioca (No sugar added)	珍珠奶茶 (不加糖)	180	0.7	29	13	Trace	6.7	6.0	0.16	6.2	60
Sour plum drink	酸梅湯	120	0	29	26	0	Trace	0	0	14	0
Soybean milk (No sugar added)	豆漿 (不加糖)	67	5.8	2.2	1.8	0	3.8	0.55	0	23	Trace
Watercress honey	西洋菜蜜	86	Trace	21	19	0	0	0	0	11	31
"Yuan-yang" (mixed coffee milk-tea)	鴛鴦 (不加糖)	130	6.0	13	12	Trace	5.8	3.6	20	170	74