

# 降低食物中鈉含量的 業界指引

## Trade Guidelines for Reducing Sodium in Foods



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## 目的

本指引是為製造和售賣食物的所有業界而編製，目的在於協助他們生產和推廣既健康又可供安全食用的較低鈉或鹽含量的食物。



## 本地食物中的鈉

2. 鹽和鈉這兩字經常被當作同義詞使用，但若以重量計算，鹽含有約40%的鈉和60%的氯(1克氯化鈉含393毫克鈉)。不過，市面上有些鹽產品會以其他成分(例如氯化鉀)<sup>1</sup>代替產品中的部分氯化鈉。標示為“較低鈉”的鹽產品的鈉含量應比普通同類產品至少低25%，以符合營養標籤法例規定。

3. 鈉天然存在於食物和食水中。不過，市民從膳食攝入的鈉主要是來自佐料和醬料，例如鹽、豉油和蠔油。另外鈉可能來自加工食物中的食物添加劑，例如硝酸鈉和谷氨酸一鈉(俗稱味精 MSG)<sup>2</sup>。一些本地佐料和醬料的鈉含量例子載於附件I。

4. 人群從膳食攝入鈉的主要來源取決於其膳食模式，而本港市民的模式可能是中西合璧。世界衛生組織(下稱“世衛”)指出，在西方飲食中，鈉的攝入量主要來自加工食物中的鹽(約佔75%)。在亞洲國家，鈉的攝入量則主要來自在烹調時或餐桌上加入於食物的鹽；至於傳統中菜，超過七成的鹽是在烹調時添加的，其餘的則是因為在餸菜中使用豉油和鹹菜。

1 氯化鉀(國際編碼系統編碼508)亦可用作增味劑，即是一種食物添加劑。國際編碼系統為食品法典委員會所採用的食物添加劑國際編碼系統的縮寫。

2 硝酸鈉(國際編碼系統編碼251)及谷氨酸一鈉(國際編碼系統編碼621)分別可用作防腐劑及增味劑。

## Purpose

This set of guidelines is intended for all food traders manufacturing and selling foods. It aims to help them to produce and promote wholesome and safe products which have lower sodium or salt content.

## Occurrence of sodium in locally available foods

2. The terms salt and sodium are often used synonymously, but on a weight basis, salt comprises about 40% sodium and 60% chloride (1 g of sodium chloride (NaCl) contains 393 mg of sodium). However, some salt products available in the market may have replaced NaCl partially with other ingredients, such as potassium chloride (KCl)<sup>1</sup>. In order to fulfill the criteria of the nutrition labelling regulation, the sodium content of salt products labelled as ‘reduced sodium’ should be at least 25% lower than their regular counterparts.

3. Sodium is naturally present in foods and drinking water. However, the major dietary source of sodium is from condiments and sauces, such as salt, soy sauce, and oyster sauce. Sodium may also present in the diet as food additives in processed foods, e.g. sodium nitrate and monosodium glutamate (MSG)<sup>2</sup>. Examples of the sodium content of some local condiments and sauces are available in **Annex I**.

4. The major sources of sodium intake of a population are affected by the dietary pattern, which for the local population is probably a mixture of Eastern and Western diets. According to the World Health Organization (WHO), in the Western diets, salt in processed foods is the major source (about 75%) of the sodium intake. In Asian countries, salt added during cooking and at table is an important source of sodium intake. In the traditional Chinese diet, over 70% of salt is added while

1 Potassium chloride (INS no. 508) may be used as a flavour enhancer, which is a food additive. INS in full is “International Numbering System for Food Additives” adopted by Codex Alimentarius Commission (Codex).

2 Sodium nitrate (INS no. 251) and MSG (INS no. 621) may be used as a preservative and as a flavour enhancer, respectively.

## 鹽/鈉與健康

5. 鈉是人體機能正常運作所必需的元素，但攝入過量的鈉可損害健康，例如會引致高血壓。根據世衛，鹽攝入量與血壓之間有劑量反應的直接關係；因此，即使原本的飲食已屬“健康”，減少鹽的攝入量也會對健康有好處。據估計，從膳食攝入鹽的分量由每日10克減至5克，整體中風發生率會下降23%，心血管系統疾病的發生率則下降17%。除了引致高血壓外，世界癌症研究基金會近年的專家報告均指出，鹽和鹽醃的食物可能增加罹患胃癌的風險。

6. 儘管現時沒有劃一的高鈉食物定義，一些國家(例如英國)可能將每100克食物含有超過600毫克鈉界定為鈉含量高的食物。但是無論任何情況，消費者應以世衛建議之鹽每日攝入量少於5克(即少於約2000毫克的鈉)為目標。

## 鹽在食品加工的作用

7. 鹽有多種功用。在食物中添加鹽，可改變食物的口味和味道(例如增加甜味和遮掩金屬味)。鹽亦可阻止微生物生長、延長產品保質期和改善產品質感(例如控制麵團的粘性和使瘦肉更嫩)。

## 國際間對減低市民鈉攝入量的做法

8. 世衛在2012年7月研發了一套預防和控制非傳染性疾病的指標和自願的全球目標。當中目標建議，平均人口鹽的攝入量要相對減少30%，目的是達到每日攝入量少於5克。世衛認為要實現這個目標，需要實施一些減鹽干預措施，例如通過在加工食品中的重新配方製造食物，以降低鹽含量。許多已採

cooking, with the remainder accounted for through the use of soy sauce and salted vegetables.

## Salt/Sodium and health

5. Sodium is essential for normal body functions. Excessive intake of sodium can be detrimental to health, such as resulting in high blood pressure or hypertension. According to the WHO, there is a dose response and a direct relationship between salt intake and blood pressure; and there is additional benefit if salt is reduced even if the diet is already a "healthy" one. It is estimated that decreasing dietary intake from 10 g to 5 g per day would reduce overall stroke rate by 23% and cardiovascular disease rate by 17%. Besides hypertension, in recent years, expert reports from the World Cancer Research Fund concluded that salt and salt-preserved foods probably increase the risk of stomach cancer.

6. Currently there is no consensual definition of foods with high sodium content although some countries (e.g. the United Kingdom (UK)) may classify a food as high in sodium if every 100 g of such food contains more than 600 mg of sodium; however, in any case, it is targeted for the consumers to meet WHO's recommendation of a salt intake of less than 5 g per day (i.e. less than about 2000 mg of sodium).

## Roles of salt in food processing

7. Salt has multifunctional roles. Salt is added in foods for its taste and flavour (e.g. enhance sweetness, mask metallic tastes). Salt can also prevent microbial growth, extend product shelf life, and improve the product texture (e.g. control the stickiness of dough, improve the tenderness of leaner cuts of meat).





取減鹽措施的國家(如芬蘭、愛爾蘭、日本和英國)都記載了正面和可衡量的結果。

9. 確保食物安全實有賴政府、業界及消費者三方共同努力。世衛建議成員國在計劃和實行有關減低市民鈉攝入量的干預措施時，可採取一些策略，包括舉辦提高市民意識的運動、實施規管、推行食物標籤、制定食物類別的營養基準、改良食物配方及其他措施。

10. 考慮到食物安全、品質和消費者接受程度，重新擬定食物配方是一種廣被採用以減低市民從食物攝入鈉的方法。以下三種措施有助把食物中的鈉含量在一段時間內減至最低水平：(一)逐漸減少或除去鹽/鈉的分量；(二)使用鈉代替品；以及(三)調整產品包裝大小。

11. 眾所周知，鹽在食物中的作用和功用視乎食物的性質而定，因此，就不同食物訂定減鈉目標是一個複雜的工作。雖然如此，不少國家(例如美國、英國、加拿大、澳洲)已就各食物類別訂定減鈉目標，並鼓勵業界在未來數年內達到這些目標。一些減鈉目標的例子載於附件II。

## International approaches on reducing sodium intake in the population

8. In July 2012, the WHO has developed a set of indicators and voluntary global targets for the prevention and control of non-communicable diseases. A target of 30% relative reduction in mean population intake of salt, with the aim of achieving a target of < 5 g/day has been proposed. The WHO opines that this target is to be achieved by implementation of salt reduction interventions such as reduced salt content in processed foods through product reformulation. Many countries with salt reduction initiatives (e.g. Finland, Ireland, Japan and the UK) have documented positive, measurable results.

9. Food safety requires proactive tripartite collaboration among the Government, food trade and consumers. The WHO has suggested some strategies for the Member States to focus on when planning and implementing interventions aiming at reducing population-wide sodium intake. These include public awareness campaigns, regulation, food labelling, benchmarking of food categories, food reformulation, and many others.

10. Taking food safety, quality and consumer acceptance into consideration, food reformulation is the widely adopted approach to reduce the sodium intake in foods. Three initiatives have been identified to reduce the sodium content in foods to the lowest level possible over time: (i) to reduce or remove the amount of salt/ sodium to the minimum little by little, (ii) to replace the sodium uses with alternatives, and (iii) to resize the package of products.

11. It is well recognised that the process of setting targets for sodium content in foods is complex since the role and function of salt vary depending on the nature of the food. Nevertheless, many countries (e.g. the United States (US), the UK, Canada, Australia) have established targets in various food categories and encouraged the trade to achieve such targets in the coming few years. Examples of some of these targets are available in Annex II.

12. 不論採用什麼策略，不少國家已證明逐步減少食物的鈉含量(無論有否使用代替品)，都可在一段時間內改變消費者的鹹味感。食物業界在製造/生產食物時可採用這些策略，並推廣較低鹽/鈉含量的食物，以減少市民的整體鈉攝入量。

13. 食物安全中心進行了一項題為『本港食物鈉含量的研究』，在2012年評估了超過600個非預先包裝食物(從實驗室測試所得)和300個預先包裝食物的(從營養標籤得知)的鈉含量，藉以提高市民和食物業界在食用及製作食物時對鈉及鹽含量的關注。結果顯示，許多食物的鈉含量偏高，尤其是漢堡包、西式醃製肉、醬汁和調味品等。參考海外有關食物的減鈉目標，這些食物的鈉含量仍有很大改善的空間(附件II)。同時，同一種類的食物中的鈉含量差別頗大，顯示許多食物的配方都可作改良。最後，研究結果亦顯示，醃鹹菜(例如冬菜、梅菜)經沖洗及浸泡後其鈉含量會減低。

### 有關製造/生產較低鈉/鹽含量的食物的建議

採購較低鈉含量的配料/食物及訂定減鈉目標

(i) 如有選擇，應選用較低鈉含量的配料。有關資



12. Regardless of the strategies used, many countries have demonstrated that reducing the sodium content of foods gradually, with or without using alternatives, allow the consumers' salty taste perception to be modified over time. The food trade can incorporate these strategies when manufacturing/ producing and promoting products with lower salt/sodium content to help the population in reducing overall sodium intake.



13. In a survey conducted by the Centre for Food Safety entitled "Study on Sodium Content in Local Foods", the sodium content of some 600 non-prepackaged foods (analysed by laboratory) and some 300 prepackaged foods (declared on nutrition label) were assessed in 2012. The aim was to arouse the awareness of the public and food traders about salt and sodium content when consuming and preparing foods. The results showed that the sodium content of many food items, particularly burgers, Western preserved meats, condiments and sauces, etc., was rather high. Based on some overseas sodium reduction targets, there is still large room for improvement on these foods (Annex II). The study also showed that a wide range of sodium levels was found within the same food group, which indicates that reformulation is feasible for many foods. Lastly, it is noted that rinsing and soaking in water could reduce the sodium content of salted vegetables (e.g. 'Dong Choy', 'Mui Choy').

### Advice on manufacturing/ producing foods with lower sodium/ salt content

*Sourcing and targeting for ingredients/ foods with lower sodium content*

(i) Choose ingredients with lower sodium content if available. The information could be obtained from

料可請供應商提供，查閱產品的營養標籤，或從一些食物成分資料庫(例如食物安全中心的營養資料查詢系統<sup>3</sup>)獲取。

- (ii) 在購買或進口食物/用以製造食物的配料時，可參考其他有關當局訂定的減鈉目標(附件II)，作為指引。
- (iii) 建立公司產品的資料庫，以監察食物的鈉含量。
- (iv) 盡量就各食物類別訂定個別的減鈉目標。一些本地食物的鈉含量及其他有關當局就這些食物訂定的減鈉目標載於附件II。

### 實踐

- (i) 使用含鹽/鈉的調味料時，應遵從優良製造規範，例如只添加所需的標準分量，或用一些便攜式鹽度計，量度非預先包裝的食物如湯、醬汁、調味品等的鹽含量，務求食物不添加過量的鹽/鈉。
- (ii) 為廚師/主廚/食品研發人提供(再)培訓，使他們了解健康飲食之道和產品中較健康的選擇。
- (iii) 根據個別食物的特徵，逐步減少所供應的食物的鹽含量。其他國家已證實部分策略和代替品的使用可以成功減少鹽含量(附件III和附件IV)。例如，要延長肉製品的保質期，除使用防腐劑外，如情況許可下調低貯存溫度兩三度，亦能延長保質期。
- (iv) 提供更多無鹽或較低鹽含量(如情況許可，提供碘鹽)的食物供顧客選擇，並在顧客要求時才添加鹽/調味料。

the suppliers, the nutrition labels of the products, or some food composition databases, such as the Nutrient Information Inquiry System from the Centre for Food Safety<sup>3</sup>.

- (ii) Make reference to the sodium reduction targets set by other authorities (**Annex II**) as a guide to purchase or import ingredients for manufacturing foods.
- (iii) Establish a database of their products so as to monitor the sodium content in foods.
- (iv) Set individual sodium reduction targets for various food categories if possible. Examples of the sodium content in some local foods and their respective reduction targets established by other authorities are shown in **Annex II**.



### Practising

- (i) Adhere to the Good Manufacturing Practice (GMP) when using salt/ sodium containing seasonings, e.g. add the standardised amount as required, or use some portable salt metres to gauge the amount of salt in some non-prepackaged food products such as soups, condiments and sauces. Aim not to add exceeding amount of salt/ sodium in food.
- (ii) Provide (re-)trainings to cooks/ chefs/ product developers on healthy eating and the healthier options of food products.
- (iii) Reduce the salt content of the food supply in a stepwise manner according to the characteristics of individual food products. Some of the strategies and replacements have been proven successful by other countries (**Annex III, Annex IV**). For example, besides using preservatives to increase the shelf-life of meat product, reducing storage

- (v) 逐步減少使用鹽和調味料，例如以新鮮、冷藏或較低鹽含量的罐裝蔬菜代替醃菜、以新鮮肉代替醃製肉或以天然的配料代替高鹽分的調味料或醬料。
- (vi) 使用天然的配料(例如檸檬、番茄)或香草和香料(例如蒜頭、辣椒、八角、香茅、羅勒等)調味和醃製食物。
- (vii) 以獨立包裝提供調味料，並以獨立容器盛載肉汁，讓顧客按其口味添加調味料和肉汁。
- (viii) 提供各種分量的食品或分量較小的食物供顧客選擇。如無法提供分量較小的食物，可建議貯存方法或改良包裝(例如使用密實袋、可重複密封的盒)，令剩餘的食物保存得更好，以便日後食用。
- (ix) 除非確有需要，否則應減少使用鹽代替品/增味劑。

## 有關推廣較低鈉/鹽含量的食物的建議

### 廣告/宣傳資料

- (i) 在符合營養標籤制度針對標籤和廣告的要求大前提下，在公司網頁或宣傳資料上列出各種菜



temperatures by 2-3 degrees where possible may extend its shelf-life.

- (iv) Provide more unsalted or lower salt content, and iodised salt as well if possible, options for customers to choose, and only add salt/ seasonings when requested at the point of sales.
- (v) Reduce the use of salt and seasonings in a stepwise manner, such as using fresh, frozen or reduced-salt canned vegetables to replace pickles, using fresh meat to replace marinated or preserved meats, or using natural ingredients to replace seasonings or sauce which are high in salt.
- (vi) Use natural ingredients (e.g. lemon, tomato) or herbs and spices (e.g. garlic, chilli, star anise, lemongrass, basil, etc.) for flavouring and marinating.
- (vii) Provide seasonings in separate packages and serve gravies in separate containers for customers to add according to their tastes.
- (viii) Offer a range of portion sizes of products or smaller dishes for customers to choose. If a smaller portion size is not possible, provide tips on or improve package for proper storage of the remaining foods for other eating occasions (e.g. use of zipper bags, resealable boxes).
- (ix) Minimise the use of salt substitutes/ flavour enhancers unless really necessary.

## Advice on promoting foods with lower sodium/ salt content

### Advertisement/ Promotion materials

- (i) Indicate the sodium content of various dishes/ products on company's homepage or promotion materials to inform the consumers the lower sodium/ salt food options, provided that the label and advertisement meet the criteria set under the Nutrition Labelling Scheme.



式/產品的鈉含量，讓消費者知道可選擇鈉/鹽含量較低的食物。

- (ii) 提供小冊子/閱讀材料有關從整體膳食攝入過量鈉的不良影響，以及在公司網頁或宣傳資料上列出各種食物的鈉含量。
- (iii) 遵從世衛的建議，限制高鈉食物的市場推廣或廣告宣傳，特別是針對兒童的。

#### 有關產品

- (i) 在營養標籤上標示的鈉含量；但在營養標籤上，其他有關該產品的宣傳資料上，以及在作出有關鈉或鹽的聲稱時，業界宜標明鹽與鈉的換算系數(例如1克鹽含393毫克鈉；或1茶匙5克鹽含有約2 000毫克鈉)。
- (ii) 如產品的鈉含量符合有關的營養聲稱條件，便可根據營養標籤規定，就鈉/鹽含量作出“不含”、“低”或“很低”的聲稱(附件V)。
- (iii) 如產品中使用鹽代替品或增味劑，業界宜在食物標籤的配料表上以名稱列出，例如氯化鉀、谷氨酸一鈉。



- (ii) Provide leaflets/ reading materials on the harmful effects of excessive sodium intake from all sources and the sodium content of the various foods on company's homepage or promotion materials.
- (iii) Follow WHO's advice on restricting the marketing or advertising of foods with high sodium content, especially to children.

#### On the products

- (i) On the nutrition label, declare the sodium content; however, the trade are encouraged to provide the conversion factor between salt and sodium (e.g. 1 g salt contains 393 mg of sodium, or 1 teaspoon of 5 g salt contains 2 000 mg of sodium) on nutrition label, other promotion materials about the product, and when making claims on sodium or salt.
- (ii) If the sodium content of the products meets the nutrition claim conditions, make the "free", "low", and "very low" sodium/salt claims by following the nutrition labelling requirement (**Annex V**).
- (iii) When salt substitutes or flavour enhancers have been used in a prepackaged food, the trade are encouraged to declare them by their name (e.g. potassium chloride, monosodium glutamate) in the ingredient list on the food label.
- (iv) When the salt substitutes contain potassium, the trade are encouraged to list the potassium content in the food products on the food label and place legible advisory statements for consumers with medical conditions or taking medications on precautions of using the products, e.g. those needed to restrict potassium intake.
- (v) For products that are naturally high in salt and cannot be meaningfully reformulated (e.g. salted fish, pickles, preserved sausages), the trade are encouraged to state

(iv) 如鹽代替品含有鉀，業界宜在食物標籤上標示其分量，並在包裝上清晰標示可閱的忠告字句，提示患病或正在服藥的消費者使用有關產品需採取的預防措施，例如一些需要限制鉀攝入的人。

(v) 至於一些天然含有高鹽分而且並不能有意地按改良配方製造的物品(例如鹹魚、醃菜、臘腸)，宜在食物上清晰可閱地述明“世衛建議每人每日從整體膳食攝入的鹽分應少於5克(即少於2 000毫克鈉)”或類似的忠告字句，以及標示進食該食物的一個食用分量



所攝入的鈉分量(可參考《預先包裝食物營養標籤的食用分量業界指引》<sup>4</sup>)。在烹調含鹹菜配料的菜式前，用水沖洗或浸泡鹹菜，以減少其鈉含量。

(vi) 飲食供應機構應自願在菜單、非預先包裝食物和飲品的標籤、價目表及其他印刷品上提供營養標籤(例如以符號標示)，包括標示食物的鈉含量，讓顧客作出知情的選擇。

#### 其他推廣活動

(i) 提供獎勵(例如優惠券/折扣/贈品/回贈積分)以鼓勵顧客購買/訂購較低鹽/鈉食物。

legibly on the product that “The WHO recommends a salt intake of less than 5 g per day (i.e. less than 2 000 mg sodium) from all sources.” or similar advisory statements, and indicate the sodium intake when one serving of the product is consumed (refer to the Trade Guidelines on Serving Size of Prepackaged Food for Nutrition Labelling<sup>4</sup>). The trade may also consider rinsing or soaking salted vegetables in water to reduce some sodium content before using them in food preparation.

(vi) For catering establishment, provide voluntarily nutrition label (e.g. in a form of symbols) including the sodium content of food products, such as in the menu, the label of the non-prepackaged foods and beverages, the price list and other printing materials, for customers to make informed choice.

#### Other promotion activities

(i) Provide incentives (e.g. coupons/ discounts/ gifts/ award points) to encourage patrons purchasing/ ordering foods with lower sodium/ salt.

(ii) Designate a period of time (e.g. lower sodium/ salt month) or a corner (e.g. shelves for snacks or sauces) in the shop to promote foods with lower sodium/ salt.

(iii) Encourage cooks/ chefs and frontline staff to provide recommendation and assistance to customers on choosing low sodium/ salt foods.



<sup>4</sup> [http://www.cfs.gov.hk/tc\\_chi/food\\_leg/files/Serving\\_size\\_of\\_prepackaged\\_food\\_clean\\_c.pdf](http://www.cfs.gov.hk/tc_chi/food_leg/files/Serving_size_of_prepackaged_food_clean_c.pdf)

<sup>4</sup> [http://www.cfs.gov.hk/english/food\\_leg/files/Serving\\_size\\_of\\_prepackaged\\_food\\_clean\\_e.pdf](http://www.cfs.gov.hk/english/food_leg/files/Serving_size_of_prepackaged_food_clean_e.pdf)

- (ii) 商店選定一段時間(例如“低鈉/鹽”月)或在店內劃出部分地方(例如小食和醬料的貨架)作宣傳較低鈉/鹽食物之用。
- (iii) 鼓勵廚師/主廚和前線員工向顧客提供建議及協助他們選擇低鈉/鹽食物。
- (iv) 用較細小的容器盛載佐料和醬料；餐桌上不放置佐料和醬料，只在顧客要求時才予以提供。
- (v) 自願提供小食的營養資料(包括鈉含量)給由香港營養學會管理的有「營」小食資料庫<sup>5</sup>。
- (vi) 向本地中英文報章雜誌的飲食及健康欄供稿，介紹有關按改良配方製造的較低鈉食物。

- (iv) Place condiments and sauce in smaller containers; remove them from the table and only present them to the customers when requested.
- (v) Submit voluntarily the nutrition information of snacks including sodium content to the "Database of Prepackaged Snacks" maintained by the Hong Kong Nutrition Association<sup>5</sup>.
- (vi) Supply articles to the food and health sections of local Chinese or English newspapers and magazines to introduce the reformulated products with lower sodium content.

#### 附件I：一些本地佐料和醬料的鈉含量

食物類別 (產品數目)	鈉含量平均值(範圍) (克以每 100 克或毫升計)	一般食用分量 (克或毫升)
食鹽 (16)	38.2 (33.9至39.2)	5
較低鈉的鹽 (6)	21.8 (13.6至25.3)	5
雞精粒 (12)	17.3 (13.3至23.6)	5
味精 (5)	12.3 (11.1至14.7)	0.5至1.0
生抽 (34)	6.6 (3.1至7.9)	5至15
蠔油 (20)	4.3 (2.1至5.7)	10至18

#### 備註：

各種佐料和醬料的鈉含量和一般食用分量資料，來自附於不同超級市場發售的一些產品上的營養標籤和食物標籤。

#### Annex I: Sodium content in some local condiments and sauces.

Food category (No. of products)	Mean (Range) of sodium content (g/100g or ml)	Usual serving size (g or ml)
Table salt (16)	38.2 (33.9-39.2)	5
Salt with reduced sodium (6)	21.8 (13.6-25.3)	5
Chicken powder cube (12)	17.3 (13.3-23.6)	5
Monosodium glutamate (MSG) (5)	12.3 (11.1-14.7)	0.5-1.0
Light soy sauce (34)	6.6 (3.1-7.9)	5-15
Oyster sauce (20)	4.3 (2.1-5.7)	10-18

#### Remarks:

Information on sodium content and usual serving size of various condiments and sauces are from the nutrition labels and food labels on some products available in different supermarkets.

附件II：一些本地食物的鈉含量及海外當局訂定的減鈉目標範圍

食物	鈉含量（毫克以每100克計）			
	本地數據			可參考的海外減鈉目標範圍
	數目	平均數	最大值	
非預先包裝食物				
西式醃製肉腸 (例如:芝士腸、司華力腸)	4	933	1 000	450-550
炸薯 (例如:薯條、薯餅)	13	370	690	240-290
漢堡包	16	528	760	300-460
薄餅	10	594	790	460-500
預先包裝食物				
沙律醬	5	828	1 200	500-760
番茄醬或番茄汁	5	1 208	1 353	660-860
西式醃製肉 (例如:煙肉、火腿)	5	2 353	6 800	610-1 470
西式曲奇 (例如:碎朱古力、法式牛油餅)	12	292	530	240-260
罐頭茄汁豆	4	455	860	100-310

Annex II: Sodium content found in some local food products and range of sodium reduction targets set by overseas authorities

Food items	Sodium content (mg/100g)			
	Local data			Range from overseas reduction target references
	n	Average	Maximum	
Non-prepackaged foods				
Western preserved sausages (e.g. Cheese sausage, Cervelat)	4	933	1 000	450-550
Fried potatoes (e.g. French fries, Hash browns)	13	370	690	240-290
Burgers	16	528	760	300-460
Pizza	10	594	790	460-500
Prepackaged foods				
Salad dressing	5	828	1 200	500-760
Tomato paste/Ketchup	5	1 208	1 353	660-860
Western preserved meat (e.g. Bacon, Ham)	5	2 353	6 800	610-1 470
Western cookies (e.g. Shortbread, Choco chips)	12	292	530	240-260
Canned baked beans	4	455	860	100-310

**備註：**

本地數據來自食物安全中心在2012年進行，題為『本港食物鈉含量的研究』，共評估了超過600個非預先包裝食物(從實驗室測試所得)和300個預先包裝食物(從營養標籤得知)的鈉含量。

可參考的海外減鈉目標範圍來自以下文獻：

1. 加拿大衛生部  
Guidance for the Food Industry on Reducing Sodium in Processed Foods 2016年的目標<sup>6</sup>
2. 紐約市健康與精神衛生局  
National Salt Reduction Initiative (Prepackaged Food) 2012年及2014年的目標<sup>7</sup>
3. 紐約市健康與精神衛生局  
National Salt Reduction Initiative (Restaurant Food) 2012年及2014年的目標<sup>8</sup>
4. 英國食品標準局  
Salt reduction targets 2010年及2012年的目標<sup>9</sup>

6 <http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/2012-sodium-reduction-indust-eng.php>

7 <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-salt-nsri-packaged.pdf>

8 <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-salt-nsri-restaurant.pdf>

9 <http://www.food.gov.uk/multimedia/spreadsheets/salttargets20102012.xls>

**Remarks:**

Local data are from the survey conducted by the Centre for Food Safety entitled “Study on Sodium Content in Local Foods”, which assessed the sodium content of some 600 non-prepackaged foods (analysed by laboratory testing) and 300 prepackaged foods (declared on nutrition label) in 2012; n = number of samples surveyed.

Range from overseas reduction target references are adapted from:

- 1 Health Canada’s Guidance for the Food Industry on Reducing Sodium in Processed Foods for 2016<sup>6</sup>.
- 2 New York City Department of Health & Mental Hygiene’s National Salt Reduction Initiative (Prepackaged Food) for 2012 and 2014<sup>7</sup>.
- 3 New York City Department of Health & Mental Hygiene’s National Salt Reduction Initiative (Restaurant Food) for 2012 and 2014<sup>8</sup>.
- 4 UK Food Standards Agency’s Salt reduction targets for 2010 and 2012<sup>9</sup>.

6 <http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/2012-sodium-reduction-indust-eng.php>

7 <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-salt-nsri-packaged.pdf>

8 <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-salt-nsri-restaurant.pdf>

9 <http://www.food.gov.uk/multimedia/spreadsheets/salttargets20102012.xls>

### 附件III：一些鹽代替品/增味劑的應用

代替品/增味劑	應用	意見
氯化鉀	多種食物(例如乳酪、麵包和肉類);可與氯化鈉混合用。	大多數人認為味苦;可增加鉀的攝入量,對某些人可能會造成損害(例如患病或正在服藥的人)。
晶體結構被改變的鹽	部分食物	多孔星狀結構,藉操控鹽的乾化過程製成,即使鹽的分量較少,也可產生較重的鹹味;如用於食物表面,應用情況尤為理想。
谷氨酸鹽(例如谷氨酸一鈉,俗稱味精)	多種食物	增強鹹味,製造“鮮”味。味精以外的谷氨酸鹽(例如谷氨酸一鉀或谷氨酸鈣)可進一步減低鈉的攝入量。
酵母精	部分食物	往往含有味精,但被視為味精的“天然”代替物;由於有肉和湯的味道,潛在用途受到限制。
核苷酸(例如肌酐一磷酸、鳥苷一磷酸)	部分食物	製造“鮮”味;被發現與谷氨酸鹽產生協同作用,增強在部分食物中的鹹味。
香草和香料	多種食物	提供其他調味特色,對某些人可有助減輕因不下鹽而令食物淡而無味的情況。
氯化鈉代替品和增味劑的混合物	多種食物	包含多種配料,例如非鈉鹽、酵母精、氯化鉀和葡萄糖酸鈉。

資料來源：美國醫學研究所(2010) *Strategies to reduce sodium intake in the United States* — 附錄D<sup>10</sup>。

10 <http://www.iom.edu/Reports/2010/Strategies-to-Reduce-Sodium-Intake-in-the-United-States.aspx>

### Annex III: Examples of the application of some salt substitutes/enhancers.

Salt substitute/ Flavour enhancer	Application	Comment
Potassium Chloride (KCl)	Many foods (e.g. cheeses, breads, meats); may be mixed with sodium chloride (NaCl).	Bitter to many people; May increase the intake of potassium and could harm certain subpopulations (e.g. those with medical conditions or taking medications)
Salts with altered crystal structure	Some foods	Porous and star-shaped structures, created by manipulating the salt drying process, allow greater salty taste with smaller amounts of salt; particularly useful in applications where salt is used on the surface of food products
Glutamates (e.g. monosodium glutamate, MSG)	Many foods	Enhances salty tastes and imparts the taste of umami (umai = “delicious”, mi = “taste”). Glutamate salts other than MSG, e.g. monopotassium glutamate or calcium diglutamate, may further reduce sodium intake.
Yeast extracts	Some foods	Often contains MSG, but is seen as a “natural” alternative to MSG use; meaty and brothy tastes limit potential uses
Nucleotides (e.g. inosine- & guanosine- 5' monophosphate)	Some foods	Imparts the taste of umami; found to act synergistically with glutamates to enhance salty tastes in some foods
Herbs and spices	Many foods	Provide other flavouring characteristics and for some people may help alleviate blandness following salt removal
Mixtures of NaCl substitutes and enhancers	Many foods	Consist of a number of ingredients such as non-sodium salts, yeast extracts, KCl, and sodium gluconate

Source: Institute of Medicine (2010) *Strategies to reduce sodium intake in the United States* – Appendix D<sup>10</sup>.

10 <http://www.iom.edu/Reports/2010/Strategies-to-Reduce-Sodium-Intake-in-the-United-States.aspx>

**附件IV：在生產肉製品時以一些其他方法代替鈉/鹽的特定功用**

功用	其他方法
防腐	冷凍至較低溫度 (如情況許可，把貯存溫度降低兩三度，以延長產品的保質期。)
調味	香草、香料、蒜頭、辣椒、青檸、檸檬、洋蔥、蕃茄、黑胡椒 焗、烤、煙燻
著色	甜紅椒粉、辣椒、蕃茄 焗、煙燻

資料來源: 英國肉類加工協會 (British Meat Processors Associations) Guidance on Salt Reduction in Meat Products for Smaller Businesses<sup>11</sup>。

**附件V：《食物及藥物(成分組合及標籤)規例》(第132W章)中有關鈉/鹽的聲稱和作出該等聲稱的相應條件**

聲稱	條件
營養素含量聲稱	
“低”鈉 (或鹽)	每100克固體食物 (或100毫升液體食物) 含不超過120毫克鈉。
“很低”鈉 (或鹽)	每100克固體食物 (或100毫升液體食物) 含不超過40毫克鈉。
“不含”鈉 (或鹽)	每100克固體食物 (或100毫升液體食物) 含不超過5毫克鈉。
營養素比較聲稱	
鈉 (或鹽)	鈉含量必須符合以下兩個條件： <ul style="list-style-type: none"> <li>• 最小相對差額：25%；以及</li> <li>• 最小絕對差額：每100克固體食物 (或100毫升液體食物) 含不少於120毫克鈉。</li> </ul>

**Annex IV: Examples of alternative methods to sodium/salt for specific functions in meat production.**

Function	Alternative
Preservative	Chilling to a lower temperature (Reducing storage temperatures by 2-3 degrees where possible may extend the life of the product.)
Flavour	Herbs, Spices, Garlic, Chilli, Lime, Lemon, Onion, Tomato, Black Pepper Roasting, Grilling, Smoking
Colour	Paprika, Chilli, Tomato Roasting, Smoking

Source: the British Meat Processors Associations - Guidance on Salt Reduction in Meat Products for Smaller Businesses<sup>11</sup>.

**Annex V: List of sodium/salt claims and corresponding criteria in the Food and Drugs (Composition and Labelling) Regulations (Cap. 132W).**

Claim	Criteria
Nutrient Content Claim	
“Low” sodium (or salt)	Not more than 120 mg of sodium per 100 g of solid food (or 100 mL of liquid food).
“Very low” sodium (or salt)	Not more than 40 mg of sodium per 100 g of solid food (or 100 mL of liquid food).
“Free” sodium (or salt)	Not more than 5 mg of sodium per 100 g of solid food (or 100 mL of liquid food).
Nutrient Comparative Claim	
Sodium (or salt)	Sodium content must meet the below two criteria: <ul style="list-style-type: none"> <li>• Minimum relative difference: 25%; and</li> <li>• Minimum absolute difference: not less than 120 mg of sodium per 100 g of solid food (or 100 mL of liquid food).</li> </ul>

食物安全中心  
**風險評估組**  
二零一二年九月

Risk Assessment Section  
**Centre for Food Safety**  
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