

FACT SHEET

Stevioside

1. What is Stevioside?

Classification: Sweetener (substance used to sweeten food/drink, especially as a substitute for sugar).

Source: It is extracted and refined from *Stevia Rebaudiana* leaves. The leaves of the *Stevia* plant have been used for centuries in Brazil and Paraguay to sweeten food and beverage.

Description: Stevioside is a glycoside of the diterpene derivative, steviol.

Relative Sweetness: It is 250-300 times sweeter than sucrose.

Applications: It is used in a wide variety of products, including soft drinks, Japanese-style processed vegetable products, table-top sweeteners, confectioneries, fruit products, processed seafood products and dietary supplements.

2. What are supranational organizations' views on Stevioside as a sweetener?

2.1 Scientific Committee on Food (SCF) of European Commission:

- SCF reviewed the safety of Stevioside as a sweetener in 1997 and "expressed concerns regarding the absence of safety data about the genotoxicity potential of a metabolite of Stevioside, about the specification of the compound (impurities) and about possible effects on human fertility."
- Based on the review of SCF, the European Commission "[does] not consider it appropriate to propose the authorization of this substance as a sweetener for use in foodstuffs." (Source: Written Question E-0374/01 in *Official Journal of the European Communities* 18.9.2001, pages C261 E/97- C261 E/98.)

2.2 The Joint Food and Agriculture Organization of the United Nations and World Health Organization Expert Committee on Food Additives (JECFA):

- JECFA provides expert advice on the safety of food additives and assigns an acceptable daily intake (ADI) to each of them. Many governments, including Hong Kong and Singapore, make reference to JECFA in formulating their food additive standard.
- JECFA has not determined an ADI for Stevioside because "data were insufficient for establishing an ADI." (Source: JECFA 51 meeting held on 9-18 June 1998 in Geneva.)

3. Which jurisdictions do not approve the use of Stevioside as a sweetener?

3.1 Hong Kong

Rationale: According to the spokesman of the Food and Environmental Hygiene Department (FEHD), "JECFA has not yet come to a conclusion regarding the safety of Stevioside."

Relevant Legislation: According to the Food Adulteration (Artificial Sweeteners) Regulations (Cap. 132, sub. leg. U), Stevioside is not included in the Schedule of Permitted Artificial Sweeteners.

- "Artificial sweetener" (人造糖) means any chemical compound which is sweet to the taste, but does not include any sugars or other carbohydrates or polyhydric alcohols.
- Schedule of Permitted Artificial Sweeteners:
 - (a) Saccharin.
 - (b) Saccharin Sodium.
 - (c) Saccharin Calcium.
 - (d) Aspartame.
 - (e) Acesulfame Potassium.
 - (f) Cyclamic Acid.
 - (g) Sodium Cyclamate.
 - (h) Calcium Cyclamate.
 - (i) Thaumatin.
 - (j) Sucralose.

3.2 European Union

Rationale: Please refer to paragraph 2.1.

Relevant Legislation: According to the European Parliament and Council Directive 94/35/EC on sweeteners for use in foodstuffs OJ No 237, Stevioside is not included in the list of sweeteners which can be sold to consumers or used in the manufacturing of foodstuff.

3.3 United States of America (US)

Rationale:

- According to the Food and Drug Administration (FDA), "the available toxicological information on it [Stevioside] is inadequate to demonstrate its safety as a food additive or to affirm its status as Generally Recognized As Safe Substance (GRAS)."
- However, such restriction is not applicable to dietary supplements. According to FDA, "in the absence of labeling specifying that stevia is being or will be used for a technical effect, use of stevia as a dietary ingredient in a dietary supplement is not subject to the food additive provisions of the Food, Drug, and Cosmetic Act."

Relevant Legislation: Food, Drug, and Cosmetic Act.

3.4 Singapore

Rationale: According to the Ministry of the Environment, "the use of stevia in food products will be approved in Singapore until its safety has been fully established and recognized by international bodies, such as JECFA."

Relevant Legislation: Sale of Food Act (Cap 283), Pt III: Sale of Food.

3.5 Other jurisdictions which do not approve the use of Stevioside as a sweetener include Canada and Australia, among others.

4. Which jurisdictions approve the use of Stevioside as a sweetener?

4.1 According to an interview with Mr Max Ho of Hong Kong Stevia Association (HKSA) on 27 March 2002, "Stevioside is approved to be used in over 20 countries, including China, Japan, South Korea and the US. In the US, Stevioside is used as a dietary supplement but not as a sweetener. The main reason is that the governments concerned regard Stevioside is safe for human consumption."

4.2 According to the press release issued by HKSA on 20 March 2002, "there is no definitive adverse medical viewpoint which shows stevia or Stevioside is harmful for human consumption."

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27 March 2002
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