



# STEVIA

## IT'S SWEET, ZERO-CALORIE, AND (TAX) FRIENDLY!

After the Thai government implemented the new sugary drinks tax on September 16, many of you might be worried that sweet drinks may not be as enjoyable as before. Relax! the government is only concerned about your health and they want you to look for healthier options on the shelf.

Each year, Thailand pays approximately THB 198.5 billion – 2.2% of the country's GDP – battling with various diseases like obesity, diabetes, and coronary artery disease, according to a survey from the Food and Drug Administration (FDA). The new tax, which aims to curb consumption of “sweet” soft drinks and carbonated beverages, will help Thailand save the money for medical services and imported pharmaceuticals.

At the moment, not only consumers are looking for healthier, more natural, and inexpensive options, but manufacturers, too, are seeking choices to help them boost sales and cut costs. Good news is stevia is here to provide the solution for the food and beverage industry.

### What is Stevia?

Some of you might have heard about stevia as a sugar replacement ingredient in popular soft drinks from 2 giant companies. The drinks claim zero-calorie with natural sweetness. That's actually not an exaggeration since stevia is a natural, non-caloric sweetener that can replace sugar.

According to Professor Emeritus Dr. Khor Geok Lin, Advisor of Global Stevia Institute, the compound named steviol glycosides is extracted from a plant originated in South America, *Stevia rebaudiana*. These days, stevia is grown commercially in many countries including China, the US, Kenya, and Paraguay.

“In order to get steviol glycosides, the leaves are dried after harvesting, followed by extraction, purification and crystallization to become high-purity stevia.” said Professor Emeritus Dr.Khor.

“As of 2017, steviol glycosides with at least 95% purity is authorized by many world leading food safety organizations including the Joint FAO/WHO Expert Committee on Food Additives (JECFA), and the European Food Safety Authority (EFSA). The US Food and Drug Administration (FDA) also accepts high-purity steviol glycosides for use in food products, as well as the food authorities in various countries like China, India, Canada, Australia and New Zealand.”



**Professor Emeritus  
Dr.Khor Geok Lin**

Advisor  
Global Stevia Institute

“Not only that, JECFA and EFSA have established an Acceptable Daily Intake (ADI) for high purity stevia extract of 4 mg per kg of body weight per day. This means that if you are an adult weight 60 kg, you can take up to 240 mg of steviol glycosides daily without health risks. The ADI applies to all age groups, including children, pregnant women, elderly, and healthy adults.”

### Safe for Diabetics

Now, many of you may ask how can steviol glycosides be safe for your health. Unlike sugar, when you consume stevia, it is not absorbed into your blood system.

Professor Emeritus Dr.Khor explained that when you consume ordinary sugar, your pancreas is triggered to release insulin to control blood glucose levels (glucose from digestion of sugar). Excess glucose will be converted into glycogen and stored in your liver. However, it goes differently for stevia. When you consume steviol glycosides, it is not absorbed like ordinary sugar but instead goes straight to your large intestine. There, microorganisms will break down steviol glycosides and consume some components for their own metabolism. After that, the undigested steviol glycosides will be removed from your body through excretion. Consumers can rest assured that stevia is fully eliminated from their body and doesn't affect their daily calorie goal.

### Beverage, Dairy and even Sauce!

Stevia usage in the past 10 years has been heavily condensed in beverages. Giant soft drink companies launched their signature carbonated drinks with stevia in the formula. You can also find stevia as a sugar substitute in various drinks like tea, fruit juice, and milk.

Chocolate milk is one of the drinks that benefit most from stevia. Not only it is a good replacement for sugar, stevia also

enhances the taste of chocolate. Mr.Chong Kam Chun, Regional Vice President, APAC of PureCircle Trading Sdn Bhd, Malaysia, revealed that the company has launched a new stevia leaf-based flavor enhancer as “Cocoa Replacer” is significantly augment the cocoa flavors, enabling companies to produce products at a manageable price point. This new enhancer can be labelled as natural flavors on product ingredient labels. This breakthrough builds on

maximum 2% extra tax on top of the current 20%.

According to Mr.Chong, adding stevia into the formula can help manufacturers maintain the products’ sweetness while lowering sugar content (g/100ml). For example, a beverage producer is producing a drink with 8-10 g/100 ml sugar content. If he carries on with the same recipe, his drink will be taxed THB 0.30 per liter more in 2019. However, if he reduces 30% of

Sigma-T, Sigma-B & Sigma-S), Zeta family, as well as PureCircle Flavours.

The Company has established a complete agronomy program collaborates with farmers who grow the stevia plants and with food and beverage companies which seek to improve their low- and no-calorie formulations using a sweetener from plants.

PureCircle has offices around the world with the global headquarters in Kuala Lumpur, Malaysia. To meet growing demand for stevia



PureCircle’s extensive range of flavors which allows them to enhance key benefits such as mouthfeel, sweetness quality and different tonalities across a wide range of applications. PureCircle’s new flavor enhancer bolsters companies’ supply of limited cocoa powder ingredients, and thereby diversify risk strategies by introducing a plant-based solution. This new product will allow developers to reduce the amounts of cocoa (about 15%) alongside sugar (about 20%) without compromising taste.

Stevia can also be found in unimaginable product like chili sauce. Again, PureCircle worked with a Malaysia-based producer to find the best possible recipe and go around obstacles like how to stabilize the formula as they replace sugar, which is a natural preservation, with stevia. After 2 years of dedication and hard work, the world’s first chili sauce was launched early this year.

With its quality as a substitution for sugar, stevia can be the solution for many Thai manufacturers who are seeking ways to re-adjust their beverage recipes in response to the new sugary drinks tax. The new regulation, which was implemented on September 16, allows manufacturers to find “healthier solution” - in other words, reduce sugar level - within 2 years, or face

sugar content to lower than 6 g/100ml and replaces it with stevia, his product can be exempted from the additional excise tax and still be as original taste as it is today. Not only that, he can also go all the way to reducing sugar content to 0% while making it tastes like the drinks with 6-8 g/100 ml of sugar.



**Mr.Chong Kam Chun**  
Regional Vice President, APAC  
PureCircle Trading Sdn Bhd,  
Malaysia

### Who is PureCircle?

As demand for stevia is on the rise, PureCircle has been established as the global leader in production and marketing of high purity stevia ingredients. PureCircle leads the industry with development of a vertically integrated, sustainable and natural supply chain. PureCircle has developed a broad portfolio of ingredient solutions and has pioneered such ingredients as Reb A, SG95 and breakthrough proprietary ingredients Alpha, Delta, Sigma Solutions Stevia (Sigma-D,

sweeteners, PureCircle is rapidly ramping up its supply capability. It recently completed the expansion of its Malaysian stevia extract facility in March 2017, increasing its capacity from current 2,500 metric tons to 5,000 metric tons, to supply the newer and great-tasting specialty stevia sweeteners and helping provide ever-increasing value to its customers.

Its high expectation also includes plan to encourage more farmers to switch from sugarcane and tobacco to stevia for better income, and to expand supply chain to many countries including Paraguay, Kenya, Zimbabwe, Uganda, Guatemala, Ecuador, India, and Indonesia, etc.

“The more people growing stevia, the more supply we can get. Then, we can improve the industry, and stevia can become a common ingredient everyone can be used”, says Mr.Chong.

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