

Stevia rebaudiana bertonii as a natural sweetener

Editorial

It is widely acknowledged that increased consumption of sugar has resulted in several nutritional and medical problems including obesity. Historically, low caloric sweeteners have been investigated as a possible substitute for sugar; one important class of low caloric sugar substitutes is known as a high intensity sweetener which is at least 50-100times sweeter than sucrose. Nowadays, the most common high intensity sweeteners in the world market are made of synthetic compounds. A frequent metallic aftertaste of such synthetic sweeteners does not provide the realistic taste of sugar. In addition high concentrations of some types of synthetic sweeteners, such as saccharin, have been reported as being hazardous to health. Early studies on laboratory rats were found to relate specifically to the unique combination of high pH, high calcium phosphate, and high protein levels in rat urine. Therefore, Saccharin induced may not be relevant to any risk to human health.¹⁻³ On the other hand, reports published by The European Food Safety Authority⁴ indicate that low concentrations of low-calorie sweeteners are safe to be consumed by humans. Further research is needed to relate the results obtained from animal studies in order to assess the risk for human health.

Stevia rebaudiana Bertoni is a branched bushy shrub of the *Asteraceae* family, native to the Amambay region in the north east of Paraguay. Stevioside and rebaudioside A are the main sweetening compounds of interest, which are commercially produced by both chemical and physical processes. *Stevia rebaudiana* has a great potential as a new agricultural crop since consumer demand for health promoting foods is increasing, and its leaves can be used as raw material for the extraction and production of functional food ingredients as well as source of carbohydrates, protein, crude fiber, minerals and other essential nutrients which are all valuable for human nutrition.^{5,6} Nowadays, due to the growth of the health food industry reduction of sucrose content of food products by full or partial replacement of sucrose using alternative sweeteners have become a viable option for producing low calorie/zero calorie foods. Low calorie food products of good quality can be made by incorporating combinations of non-caloric and carbohydrate sweeteners.⁷

Additionally, the previous literature findings were also reviewed which suggest that stevia could be used as a natural sweetener and a sugar replacer in different foods. Although, several researchers have claimed that stevia offers therapeutic benefits such as having anti-hyperglycemic, anti-hypertensive, anti-inflammatory, anti-tumor, anti-diarrheal, diuretic, and immunomodulatory effects; further study is needed to assess its toxicological effects on human health. It can be concluded that stevia is safe and can be used to promote and improve the human nutrition.⁵

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Conflict of interest

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