

Present Essential Herb A All – In- One Therapy: Stevia Rebaudiana

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ABSTRACT

Stevia Rebaudiana Bertonii is a born place of South America and it's a Asteraceae family. It has a many therapeutic properties against of hypertension, diabetes, inflammatory, microbial, fungal, neoplasia properties etc. Its vast application as anti-glycemic activity. *Stevia rebaudiana* has 250-300 more sweeter than sucrose. It is a non -caloric. It is also called the nick names as Honey leaf, Sweet leaf, Sugar leaf, Candyleaf, Meethi Tulsi ,Meethi Patti in India, and Tian ju ye in China. It is Perennial herb. It is generally grow in the open air. And also in plant out doors. And its cultivation in better in green house. Generally the growth height of *Stevia rebaudiana* is around 60-120 cm. It has a potential effect on human gut bacteria. *Stevia* contains 9.1% stevioside and 3.8% rebaudioside A. The flowers are mostly trimmed to enhance the sweet of the leaves. There is different from the sucrose in points like heat-stable, PH -stable, and do not ferment. The acceptable limit of *stevia* glycosides is 4mg /kg body weight /day. Stevioside and rebaudioside A were discovered in 1931 by French Chemist , Bridel and Lavielle. In *Stevia rebaudiana*, the biogenesis occurs in the tissues. The flowers are white & light purple and no fragrance. *Stevia* grows in sandy -like-soil. A green house gases are most prefer to grow *stevia*. It primarily used as a low -calorie sweetener in food and beverages. It has a most potential herb for all crucial diseases. It also has a valuable sources.

Keywords: Neoplasia, anti-glycemic, perennial, biogenesis, green house gases, ferment

INTRODUCTION

Stevia rebaudiana Bertonii water extracts have been used as a natural sweetener and generalized medicine by the specimen native of South America for several years and belongs to Asteraceae family. *Stevia* contains a compound Steviol, are 250-300 more sweeter than sucrose. The genus *Stevia* belongs to asteraceae family found 230 species of it. It also called as "Honey leaf" especially in Brazil and Paraguay. *Stevia* contains more nutritional values than FDA and WHO recommend. The Steviol glycosides are named as ent-kaurene-type sugar groups linked to the aglycone steviol. These sugar groups either be glucose, rhamnose, xylose, fructose or deoxyglucose, forms five distinct SG families. The phenolic compounds found in *stevia* leaves that have the highest antioxidant activity are diosmin, rutin, ferulic acid, caffeic acid, ellagic acid, chlorogenic acid, is chlorogenic acid, and other hydroxycinnamic acids. The sugar glycosidic moieties plays a key role in *stevia rebaudiana* metabolism. The synthesized *stevia* when conjugated with triazole group produce a wide

range of isosteviol derivatives. Example are Isosteviol, with a modified carboxyl group and, an isosteviol triazole conjugate with benzene ring. The tetracyclic diterpenoid supports like a backbone and one of the reasons for sweetness.

Stevia effect on gut bacteria:

Steviol glycosides can't be broke through enzymes such as pancreatic alpha-amylase, pepsin, and pancreatin found in saliva and gastric secretions, and pass intact through the upper gastrointestinal tract where finally they are hydrolyzed by intestinal bacteria to steviol. *Bacteroides* hydrolyze stevioside and REB-A to steviol, while other bacteria such as *Lactobacilli*, *Bifidobacteria*, *Clostridia*, *Coliforms*, and *Enterococci* cannot. Absorbed steviol via the portal vein reaches the liver, is metabolized to steviol glucuronide, and is excreted in the urine.

Therapeutic usage of Stevia Rebaudiana:

Stevia has a properties of reduce blood pressure, hypoglycemia, anti-oxidant, neoplasia, lowering

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inflammation, anti-microbial, anti-fungal, disease resistance antiglycation, antimalarial, Anti-diarrheal, Anti-diuretic, enhances kidney function and immunomodulatory effects

Story behind the natural sweetener:

In the 20th century, stevia Rebaudiana has been used vastly after that suddenly come notice from FDA. And stated that Stevia Compounds are unsafe food addictive and prohibited its use as a sweetener in the united states, it cause potential risk to consumer health. After some years it turns and named as Generally Recognized as Safe (GRAS). In the year 2008, it statement was released as that specific forms of stevia were considered safe for consumption.

Chemical Constituents of Stevia Rebaudiana:

The plant contains a phenols, flavonoids. Palmitic, Palmitoleic, Steraic, Oleic, linoleic and linolenic fatty acids.

Nutritional part of Stevia:

It contains Vitamin C, Vitamin B12, Folic acid, amino acids, fats, carbohydrates, reducing sugars Terpenes. Aldehydes. It also rich in micro and macroelements such as Zn, Fe, Ca, K, Na, Mg.

Antiglycemic activity of Stevia Rebaudiana:

The management of diabetes-2 is by reducing post prandial type-2 diabetes. It inhibits the carbohydrate hydrolyzing enzyme such as alpha- amylase alpha-glucosidase present in the gastrointestinal tract. The inhibition of alpha-glucosidase and alpha amylase can significantly decrease the post prandial when raising of blood sugar. It enhances the increases the susceptibility to insulin & and reduce the blood glucose. It has a side effects of gastro intestinal symptoms.

Types in Stevia Rebaudiana:

The glycosylation processes of the aglycone (steviol) catalyzed by a cytosolic UDP- dependent glycosyltransferases (UGTs) producing different types of SGs. Glucose is a main sugar molecule in SGs, and remaining rhamnose and xylose are present in less SGs, such as Reb C and dulcoside A. The stevia

glycosides such as A, B, C, D, E and dulcoside A, were identified from stevia leaves. But the high abundant steviol glycosides in stevia leaves are stevioside (4-13% wt;wt), Reb A (2-4%), and Reb C (1-2% wt;wt). Until now more than 40 steviol compounds are discovered. Such that Reb F, G, H, I, J, K, L, M, N, O and Q (A, D, E).

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