

Part of the problem – and perhaps part of the answer?

All in the industry are only too well aware, sugar and its impact on health and nutrition has been making the news – again. The issue will not be going away and so, must be addressed. In what may seem an ironic twist, an innovative Australian company is using a sugarcane extract to do just that – they are helping to address global diabetes and obesity.



Shane Mitchell – CEO The Product Makers.

Australian food flavouring company, The Product Makers (TPM) is aiming to improve lives around the globe with a sugarcane extract called Phytolin.

Many in the industry will recall the 2009 launch of the world's first low GI cane sugar product, LoGiCane. Australian research and development firm Horizon Science worked with the Mossman Mill in far north Queensland for four years perfecting a process to lower the glycemic index of raw sugar.

With government funding – and with ongoing support from the Australian Sugar Industry – a considerable amount of work was done with natural purified sugar mill extracts. They were looking to retain and isolate polyphenols.

Polyphenols are compounds found abundantly in natural plant food sources that have antioxidant properties. There are over 8000 identified polyphenols found in foods such as tea, wine, chocolates, fruits, vegetables, and extra virgin olive oil.

Depending on your beverage of choice, you'll notice them in tea that's brewed too strong or in the back palate of red wine. Anything that makes your mouth pucker generally contains polyphenols.

In plants, polyphenols help defend against attack by insects and give the plants their colour.

In humans, studies suggest polyphenols may be beneficial when it comes to:

- Reducing obesity;

- Combating and helping to prevent the onset of type 2 diabetes;
- Controlling blood glucose homeostasis;
- Reducing blood cholesterol;
- Assisting in weight control and loss (by reducing the formation of fat tissue); and,
- Improving blood vessel dilation, enhancing blood flow and providing anti-inflammatory properties.

After considerable research and the development of a new membrane filtration process, the LoGiCane team was able to isolate polyphenols from the sugar mill processing extract.

The initial extract (Benecarb) was further refined and has now been patented and trademarked under the name of 'Phytolin' by TPM.

TPM CEO Shane Mitchell believes that "the health benefits of Phytolin not only include assisting the management of type 2 diabetes but delivers anti-oxidants and anti-inflammatory benefits that can address metabolic syndrome. These properties together reduce oxidative stress and inflammation in the body".

Phytolin and low GI

The Glycemic Index (GI) is a measure of how quickly carbohydrates are digested or broken down in the body. High GI foods can result in rapid spikes and crashes in blood glucose levels, both of which can cause health issues.

A low GI diet can reportedly increase the body's sensitivity to insulin. It forms part of a healthy diet, helping to lower and control weight, and leading to greater physical endurance and a general increase in your feeling of wellbeing.

TPM says that, when added to a high GI food, Phytolin will lower its GI level by slowing the rate of absorption of glucose into the blood stream. When tested by the Sydney University Glycemic Index Research Service, Phytolin added to sugar resulted in a product with GI of less than 55. Refined white sugar has a GI range of 68-70.

TPM has undertaken extensive research on the application of Phytolin. Their work has included adding the extract to a range of beverages, biscuits, cakes and muffins. When Phytolin is added to rice, bread and cereals, the company believes that there is an improvement in their health properties – and this is with minimal changes to existing formulations.

TPM have also transferred their intellectual property and technology of their globally patented low GI sugar, to their partners in India. This has enabled the launch of G-Low and Phytolin into the sub-continent.

India is one of the largest countries battling type 2 diabetes and obesity. It is well established that consumption of low GI diets and ingredients are key parts of the management of diabetes and obesity.

"Our commitment to this concept from inception, through development to launch has resulted in an Australian world-wide first. We're incredibly proud that there is no other product available in the market, anywhere in the world, that provides the health benefits and bioactive properties of Phytolin" said Mitchell.

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