

Palatinose™ – Prolonged energy supply

Our body needs energy. Carbohydrates play an important role in this, as they provide glucose, the preferred energy source for physical and mental activities. Some parts of the body, such as the brain or the central nerve system, even depend on glucose. Accordingly, nutritionists worldwide recommend to obtain more than 50 percent of the daily energy intake from carbohydrates.

Palatinose™ provides a more balanced and longer glucose supply

Palatinose™ supplies our body with glucose. It is a fully available carbohydrate and thus provides the same amount of energy as other available carbohydrates (4 kcal/g) – yet in a more balanced way and over a longer period of time. This unique characteristics come from the significantly slower and yet complete digestion of Palatinose™ in the small intestine – as compared to conventional carbohydrates, such as sugars and starches.

The result is a more balanced provision of blood glucose: Palatinose™ has a slower, overall lower blood glucose response which is maintained for a longer period of time than with conventional sugars and thus allows a more constant and balanced supply of energy.

Glucose is energy

The role of glucose in metabolism is primarily that of energy supply. Thus, before other energy providers – such as fats and proteins, glucose will be ‘burned’, i.e. used up with the aid of body insulin. A longer availability of blood glucose – as with Palatinose™ – thus means a longer supply of the body with energy from carbohydrate burning.

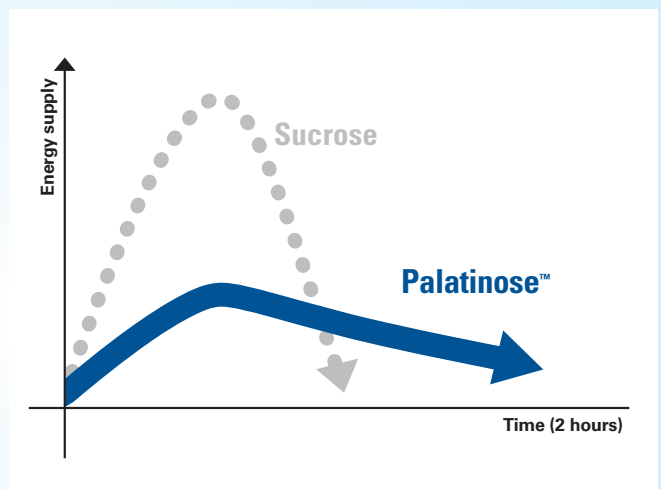


Figure 1: Palatinose™ compared with glucose and sugar

The sustained energy supply of Palatinose™ is shown via blood glucose response curves. The response curves of standard sweetening carbohydrates, sucrose (sugar) or high fructose corn syrup (HFCS), are here generally compared with the response curve of Palatinose™. A number of scientific studies have confirmed the unique characteristic of a longer lasting energy supply for Palatinose™. And this effect of Palatinose™ has also been shown in blends with other sugars, such as fructose, sucrose/HFCS and/or glucose.

Who will benefit from a more balanced and longer energy supply with Palatinose™?

Palatinose™ is good for all those who want to maintain and optimize their physical and mental performance. Palatinose™ enables a more balanced and longer energy supply in the form of glucose. That means a continuous supply of energy for muscles and brain over a longer period of time. Large fluctuations of blood glucose levels are prevented avoided. These are thought to be associated with the feeling of hunger and a drop in performance. Moreover, an overall lower blood glucose response and the resulting lower insulin release by the body have a positive effect on metabolism and are thus potentially health-promoting.

Especially for endurance activities, Palatinose™ more evenly provides the desired energy from glucose. This allows the maintenance of fat burning at a higher level, i.e. the body gains energy from its own fat reserves to a greater extent. Ideally, this allows the body's own carbohydrate reserves to be saved for the benefit of longer endurance.

Palatinose™ also supports mental performance. Studies have shown that the choice of a low glycemic breakfast versus a high glycemic breakfast seems to be advantageous for the memory.

In which products can Palatinose™ be used?

Since 2005, BENEÖ-Palatininit produces Palatinose™ for the food industry and meanwhile it is used as a functional carbohydrate in a steadily growing number of food and drinks. Prolonged energy release with Palatinose™ is particularly suitable for sports and energy beverages. Wellness and functional beverages also offer excellent application possibilities. Its sensorial and technological properties allow the development of products with an excellent taste.

The taste profile of Palatinose™ is accordingly described as pure, mild and sugar-like, but less sweet and without any aftertaste. The combination of its nutritional physiological benefits with its sensory and technological properties make Palatinose™ a unique carbohydrate with great market potential for products supporting an active lifestyle that is based on healthy nutrition.



What is Palatinose™ and what makes it special?

Palatinose™ (generic name: iso-maltulose) is a carbohydrate that occurs naturally in, for example, honey. For use in larger quantities as a functional carbohydrate in food, Südzucker/BENEÖ-Palatininit developed a process to obtain



Palatinose™ from sugar (sucrose). The only difference between Palatinose™ and sugar lies in their bond between the glucose and the fructose units. The more stable bond of Palatinose™ is broken down more slowly by the enzymes of the gastrointestinal tract but nevertheless completely. Palatinose™, as a functional carbohydrate, combines various beneficial physiological properties that are usually attributed to carbohydrates that are less digestible (and often less well tolerated). Palatinose™ is kind to teeth. While cariogenic oral bacteria are not able to use it, however, Palatinose™ is fully available for the human organism. Its special characteristic is the slow digestion and absorption in the small intestine. As a result of this, Palatinose™ has a low effect on blood sugar level and insulin. With its prolonged energy supply in the form of glucose it supports physical and mental performance and also promotes an improved fat oxidation during physical activity.

Palatinose™ is used as a functional carbohydrate, for instance, in sport and wellness drinks, sports nutrition, instant beverages, functional dairy and tea, cereal and energy bars, baked goods, beer and clinical nutrition.



Should you have any questions regarding Palatinose™, feel free to contact:

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