

# ALPHADEXTRIN – A SOLUBLE FIBER WITH A LOW GI HEALTH CLAIM

Low-glycemic-index (GI) foods are an important component of a healthy human diet not only for diabetics but also for health-conscious people who want to control their blood sugar levels. Low-GI foods take longer to digest and maintain the blood glucose at a more even rate. Thus a low-GI diet can help to reduce the risk of heart disease and other diseases related to blood sugar levels. Over the years, many food ingredients have been proposed to reduce the glycemic response of carbohydrate-based foods, such as fructose, lactose, galactose and soluble fibers. Now such a soluble fiber with an approved EU health claim is available: CAVAMAX® W6 alphasoluble fiber. CAVAMAX® W6 can lower the blood sugar increase – so creating carbohydrate-rich, low-GI foods is now easy!

Adding fiber ingredients to food or beverages frequently causes problems. There are limits on the use of fiber ingredients due to high viscosity, poor stability, taste problems, discoloration or loss of crunchiness.

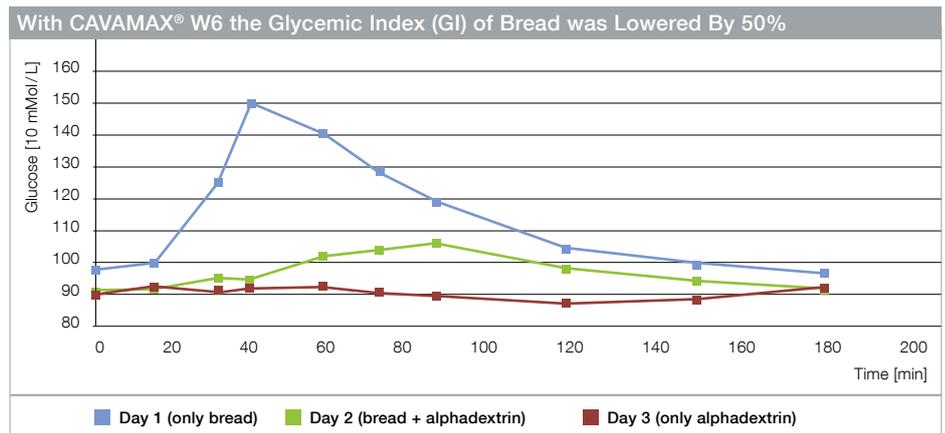
## CAVAMAX® W6 Alphasoluble fiber: The Solution

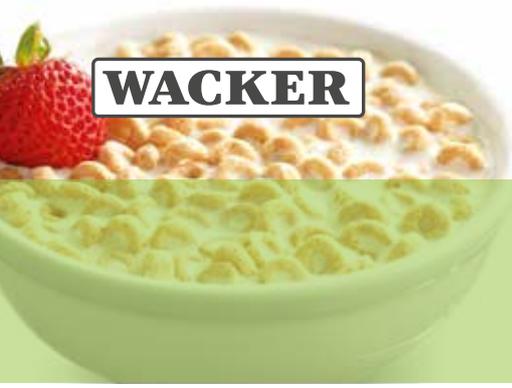
CAVAMAX® W6 alphasoluble fiber is a naturally occurring cyclic oligosaccharide which is produced enzymatically from starch. It is a well-defined, chemically pure substance and has beneficial technical properties. It is also known under the synonym alpha-cyclodextrin. CAVAMAX® W6 alphasoluble fiber is a non-digestible, yet fully fermentable water-soluble dietary fiber.

## Benefit: Health Effects on the Glycemic Index

The positive effect of CAVAMAX® W6 on the glycemic index (GI) has been proven by a clinical trial. In an initial treatment, 12 male individuals were given 100 g of white

bread, corresponding to 50 g of starch. Three hours after consumption the blood glucose and blood insulin levels were measured. In a second step the same amount of bread was consumed together with 10 g of CAVAMAX® W6 (in 250 ml of water). And in a third step 25 g CAVAMAX® W6 was consumed alone. In between treatment days there was a wash-out period of at least 48 h. It was shown that the usual peak in blood glucose after consumption of starch-containing food is significantly lower in height and delayed in time when CAVAMAX® W6 is administered in parallel (see graphic). CAVAMAX® W6 itself, as a soluble fiber, does not lead to any increase in blood sugar.





**Benefit: Health Claim**

Manufacturers may state a blood-sugar-lowering effect on their labeling when using alphasdextrin as dietary fiber.

The European Commission has confirmed a health claim to the effect that alphasdextrin can reduce blood sugar peaks. Commission Regulation (EU) No. 536/2013 on the list of permitted health claims made on foods ascribes a scientifically accepted blood-sugar-regulating effect to alphasdextrin: "Consumption of alpha-(cyclo)dextrin as part of a starch-containing meal contributes to the reduction of the blood sugar rise after that meal." By reducing blood glucose peaks after meals, alphasdextrin also helps to maintain blood vessel health.

**How to Use the Health Claim**

Food containing at least 10% of alphasdextrin per starch content of a meal may now carry a label claiming that the product has a blood-sugar-lowering effect. But the original wording of the health claim provided by the EU must appear somewhere on the food packaging and it must always refer to alphasdextrin.

However, it can be complemented by an accompanying non-specific claim. The following non-specific claims, which only use a different wording, are permissible:

- For a constant blood-sugar level
- For a uniform blood-sugar level
- Prevents high blood-glucose peaks after meals
- Smooths the rise of blood glucose after meals
- Controls blood-glucose rise after meals

Also permissible are additional non-specific claims that include an interpretation:

- For reduced glucose resorption
- Adds to a balanced glucose-insulin interaction
- Contributes to a balanced insulin flow
- Contributes to blood-vessel health
- For healthy blood vessels

For instance, alphasdextrin may be marketed as an ingredient for muesli bars or muesli, as an ingredient for functional beverages or as a food supplement for blood-sugar management\*.

**Benefit: Low Viscosity**

CAVAMAX® W6 is a readily soluble dietary fiber with a viscosity similar to that of sucrose.

**Benefit: High Stability**

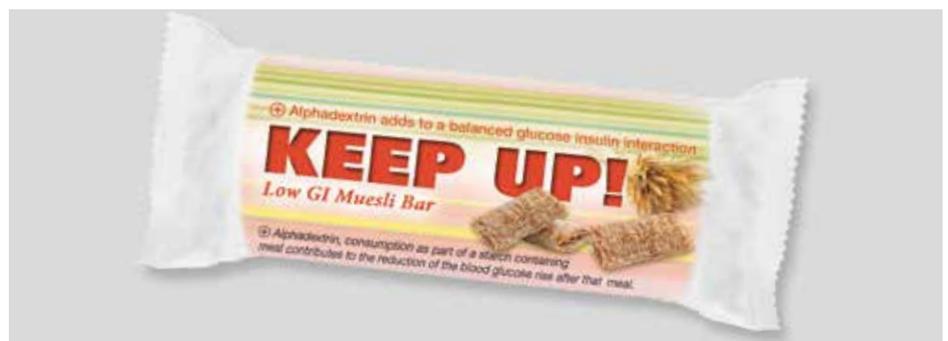
CAVAMAX® W6 (10% aqueous solution) remains stable at temperatures of up to 100 °C (212 °F) and a pH of 2.4, without showing signs of degradation.

**Benefit: Non-Hygroscopic**

Water adsorption can reduce the shelf life of crispy foods. With CAVAMAX® W6 breakfast cereals and savory snacks remain crunchy.

**Benefit: No Browning**

Many dietary fibers contain reducing sugars. Their reaction with proteins (Maillard reaction) can lead to browning and undesirable color changes. CAVAMAX® W6, contains no reducing sugars. Accordingly, it does not promote the browning of food, regardless of the pH.



\*Suggestions only – subject to approval in accordance with local regulations.



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