Scientific publication shows that chicory root fibres can
significantly lower the blood glucose response in sugar-reduced food products

Prebiotic chicory root fibres can significantly lower the blood glucose response when used to partially replace the sugars in a food product. This effect has now been confirmed for formulations with low levels of sugar replacement in two well-designed blood glucose response studies\(^1\). Correlation analysis of the data also highlighted the more sugar that is replaced with chicory root fibre, the lower the blood glucose response will be. The linear slope suggests this effect can be seen with less than the 20% of sugar replacement, which is the lowest level that was experimentally tested.

The clinical trials were carried by Helen Lightowler and Sangeetha Thondre from the Functional Food Centre at the Oxford Brookes University in Oxford, UK. The trials followed a randomised, double-blind, controlled cross-over design with 40 to 42 healthy adults. Both compared blood glucose and insulin responses of foods that were identical in composition yet contained either full sugar, or the sugar had been partially replaced with BENE\(^{O}\)’s chicory root fibres oligofructose or inulin.

The first study included a yoghurt drink in a portion of 250g, in which 20% of the sucrose was replaced with oligofructose (Orafti\(^ {®}\) P95). A 14% reduction in blood glucose response was measured, compared to the conventional full sugar yoghurt drink and similarly the insulin response was reduced by 17%. The second study included a 110g portion of fruit jelly in which 30% of the sucrose was replaced with inulin (Orafti\(^ {®}\) GR). A 16% reduction in blood glucose response was noted and the insulin response was reduced by a dramatic 40%.

The studies comply with state-of-the-art guidelines and international standards for blood glucose response testing and scientific substantiation of related claims (providing data for

insulin in parallel). Part of the research was submitted and accepted as pivotal study for the successful EU 13.5 health claim for a lower blood glucose response with chicory root fibres, respectively. It was co-financed by BENEÔ, Cosucra and Sensus².

The authors stated that: “Lowering the blood glucose response to food products with chicory inulin or oligofructose, instead of sugars, could contribute to prevention and reducing the risk of chronic metabolic diseases. With the suitable properties of oligofructose and inulin as sugar replacers in food products, this could be achieved without compromise in taste and sensory qualities which is essential for the acceptance of such food products by consumers in their everyday life.”

Inulin and oligofructose are natural, non-GMO, clean label prebiotic fibres that are derived from chicory root via a gentle hot water extraction method. Chicory root fibres are not digested by human enzymes, making them unavailable for glucose release into the blood stream, ensuring that their consumption does not raise blood glucose levels. Chicory root fibres also increase the product’s dietary fibre content at the same time. Being soluble and having a mild sweet taste, both oligofructose and inulin can replace sugars in a wide variety of foods products while maintaining taste and texture.

- ENDS -

For further information on BENEÔ and its ingredients, please visit: [www.beneo.com](http://www.beneo.com) and [www.beneonews.com](http://www.beneonews.com) or follow BENEÔ on Twitter: @BENEÔ or LinkedIn: [www.linkedin.com/company/beneo](http://www.linkedin.com/company/beneo)

The BENEÔ-Institute is an organization which brings together BENEÔ’s expertise from Nutrition Science and Legislation teams. It acts as an advisory body for customers and partners reaching from ingredient approval, physiological effects and nutritional composition to communication and labelling. The key nutritional topics of the BENEÔ-Institute’s work include weight management, digestive health, bone health, physical and mental performance, the effects of a low glycaemic diet as well as dental health.

² All companies produce chicory root fibre and are members of CEFI (Comité Europeen des Fabricants d’Inulin)
The BENEO-Institute facilitates access to the latest scientific research and knowledge throughout all nutritional and regulatory topics related to BENEO ingredients. It provides BENEO customers and partners with substantiated guidance for some of the most critical questions in the food industry. BENEO is a division of the Südzucker Group, employs 900 people and has production units in Belgium, Chile, Germany and Italy.

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