

A heart for health with beta-glucans

Beta-glucans offer an excellent way to develop more healthy snacks by using dietary fibre and promoting heart health. Integrating this plant-based ingredient allows products to qualify for approved health claims. Let's focus on the importance of heart health and learn how to practically apply these advantages!

Most consumers worldwide understand the connection between heart health and their overall well-being.¹ For example, 7 out of 10 European consumers show interest in products that support heart health, even if they don't have specific health concerns.² As a result, providing snacks with approved health claims presents a compelling opportunity for manufacturers.

To achieve this in an easy and affordable way, incorporating beta-glucans from barley into recipes is the way to go. Barley beta-glucans are viscous, soluble, fermentable dietary fibres with scientifically proven benefits for heart health. Because of this, they also enable fibre enrichment and corresponding claims.

Beta-glucans generate a high viscosity, which makes the food thicker and slows its passage through the gastro-intestinal tract. This delays the uptake of glucose from food, lowering the blood glucose response.³ In addition, the high viscosity lowers the uptake of bile acids and thereby reduces blood cholesterol concentration⁴, helping to cut the risk of coronary heart disease.

Snacks enriched with these functional ingredients provide advantages not only for consumers but also for producers. With more than 120 scientific studies demonstrating the beta-glucan health effects from cereals, official bodies including EFSA, the FDA and Health Canada have approved corresponding health claims.⁵

The BENEOTechnology Center developed



multiple recipes with beta-glucans that can carry high fibre and EU health claims, like "Barley beta-glucan has been shown to lower/reduce blood cholesterol. High cholesterol is a risk factor in the development of coronary heart disease". This claim can be used for foods that provide at least 1 g of barley beta-glucan per quantified portion. The beneficial effect is obtained with a daily intake of 3 g barley beta-glucan. One of those developed recipes are mouth-watering multi-grain biscuits. Not only do they offer health benefits, but also a desired texture and great taste.

BENEOTechnology, a leading producer of functional ingredients, offers barley beta-glucans in the form of Orafiti® β-Fit, a clean label, non-GMO, vegan friendly wholegrain barley flour with a beta-glucan content of 20% on dry matter. Orafiti® β-Fit can be used in a wide variety of applications. Some snack

solutions can include baked goods like biscuits, muffins, cookies and cakes as well as extruded cereals. Also in dairy and dairy alternatives it can serve as a clean label texturiser.

BENEOTechnology's Customer Technical Support Manager, Dr Isabel Trogh, sheds even more light on this versatile ingredient: "Orafiti® β-Fit is a cost-effective ingredient that offers technical advantages alongside health benefits for consumers. As well as having a neutral colour and taste, it is pH and temperature stable. When reformulating recipes with Orafiti® β-Fit, in some cases, small adjustments, like adding a bit more water, might be necessary. But most applications allow for a simple 1:1 replacement of the original flour ingredient, e.g., wheat flour, with our wholegrain beta-glucan rich barley flour."

Our experts created several dishes to showcase beta-glucans in everyday foods. For example, let's take a traditional pasta dish and make it even better! By enriching the pasta recipe with beta-glucans, you offer the undeniable benefit of supporting heart health.



References:

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- 2 FMCG Gurus Understanding Heart Health in 2021
- 3 AbuMweis S, Thandapilly SJ, Storsley J, Ames N (2016). Effect of barley -glucan on postprandial glycaemic response in the healthy human population: A meta-analysis of randomized controlled trials. *Journal of Functional Foods*, Vol. 27, 329-342. <https://doi.org/10.1016/j.jff.2016.08.057>
- 4 AbuMweis SS, Jew S, Ames NP (2010). -glucan from barley and its lipid-lowering capacity: a meta-analysis of randomized, controlled trials. *European Journal of Clinical Nutrition*, 64(12), 1472-1480. <https://doi.org/10.1038/ejcn.2010.178>
- 5 US: 21 CFR §101.81 ; CAN: Summary of Health Canada's Assessment of a Health Claim about Barley Products and Blood Cholesterol Lowering, July 2012; EU: Commission Regulation (EU) No 432/2012 of 16 May 2012; Commission Regulation (EU) No 1048/2012 of 8 November 2012; [EFSA Journal 2009; 7(9):1254; EFSA Journal 2011;9(6):2207; EFSA Journal 2011;9(12):2470].

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