

OATIN TECHNOLOGY OAT BETA-GLUCAN ISOLATE

Oat β -glucan isolate with 1,3-1,4 bonds is a water-soluble polysaccharide that occurs naturally in oat cell walls. The isolate, obtained through OATin Technology, is characterised by the highest level of purity, standardised content of the active compound, and a molecular weight of 1 MDa, which ensures a consistent biological effect.

DIFFERENCES BETWEEN BETA-GLUCAN 1.3-1.4 AND BETA-GLUCAN 1.3-1.6

β -glucan 1.3-1.4 (cereal) – has metabolic, anti-inflammatory, and prebiotic effects. It stabilises the digestive tract, improves the lipid profile, supports the intestinal barrier, and modulates the microbiota. It has been granted health claims by EFSA and FDA.

β -glucan 1.3-1.6 (yeast, fungal) – has a particularly strong immunostimulatory effect by activating receptors on the surface of immune system cells.

The difference in chemical structure results in a difference in the mechanism of action – β -glucan with 1,3-1,4 bonds has a more complex effect (from the intestines to metabolism), while 1,3-1,6 bonds mainly have an immunostimulatory effect.

CHARACTERISTICS OF OATIN TECHNOLOGY BETA-GLUCAN ISOLATE

High purity – elimination of protein and lipid contaminants present in commercially available preparations.

Repeatability and standardisation – each batch is characterised by a specific purity and molecular weight.

High bioavailability – thanks to a unique isolation process, the structure of natural 1,3-1,4 bonds is preserved.

Confirmation of clinical efficacy – in QUUS clinical trials for gastric ulcers in horses, products based on OATin Technology β -glucan isolate showed over 50% higher efficacy than cereal β -glucans available on the market

EFFECTIVENESS OF OAT BETA-GLUCAN IN SCIENTIFIC RESEARCH: STOMACH ULCERS IN HORSES

QUUS research: supplementation with oat β -glucan isolate was associated with a reduction in the incidence and severity of stomach ulcers in horses – 75% effectiveness

Veterinary Medicine in the Field 2022 “The use of oat β -glucan isolate in the treatment of gastric ulcer syndrome in horses”

REDUCTION OF INFLAMMATION AND INCREASE IN IMMUNITY

β -glucan 1,3-1,4 reduced levels of pro-inflammatory cytokines (IL-1, IL-6, IL-12, TNF- α), CRP protein and inflammatory mediators (MPO, COX, PGE2), helped restore normal functioning of disturbed cytokine pathways, which limited the progression of inflammation.

Macroscopic and microscopic changes in the large intestine tissue were observed to regress, indicating a regenerative and protective effect on the mucous membrane.

The immune system regained its ability to properly control the inflammatory response more quickly. Benefits were observed at both the molecular (cytokines) and organ (intestinal tissue) levels

International Journal of Molecular Sciences 2021

"Anti-Inflammatory Activity of Oat Beta-Glucans in a Crohn's Disease Model: Time- and Molar Mass-Dependent Effects"

<https://www.mdpi.com/1422-0067/22/9/4485>

PREBIOTIC

Oat β -glucan acts as a substrate for intestinal bacteria (e.g., Lactobacillus, Bifidobacterium), increasing the production of short-chain fatty acids (SCFA: butyrate, propionate, acetate).

This effect promotes intestinal barrier integrity and reduces local inflammation.

Pathogens. 2021. 2021

"In vitro–in vivo Validation of Stimulatory Effect of Oat Ingredients on Lactobacilli"

<https://www.mdpi.com/2076-0817/10/2/235>



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PROPRIETARY TECHNOLOGY
FOR BIOREFINERY OF OAT
B-GLUCAN ISOLATE

OAT *in*
TECHNOLOGY

