

Product information

Leaflet

GlyCare® LNT

Human Milk Oligosaccharides
brought to you by dsm-firmenich,
at the forefront of HMO innovation

Early life nutrition innovation from dsm-firmenich

Providing the best infant nutrition is vital for all families. That's why dsm-firmenich is proud to offer GlyCare® HMOs. These compounds are developed with science-backed quality and safety at their core. As a fully integrated manufacturer with one of the broadest HMO offerings, dsm-firmenich can reliably provide ease-of-scale no matter the size of your business. Partner with us to get your products one step closer to what nature intended.

Partner with dsm-firmenich for access to our broad portfolio of products, customized solutions, and expert services aimed at supporting your entire product life cycle, from concept to consumption.

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Human Milk Oligosaccharides (HMOs): delivering the benefits nature intended

Uniquely human

- HMOs are complex carbohydrates found in human breastmilk
- No other mammal has near the concentration and complexity of structures in their milk¹⁻⁶

Abundance and diversity in human milk

- 3rd largest component of human milk⁷
- >200 different HMOs identified in human milk, a diversity not seen in other animal milks⁴⁻⁶
- Variation occurs over lactation period, by maternal genetics, geographic region, and ethnicity^{8,9,25}

Complex structures with potential functional benefits

- Help establish a balanced early-life microbiota^{10,11}
- Contribute to immune system support¹²⁻¹⁶

Lacto-N-tetraose (LNT): A neutral-core HMO found in both colostrum and mature milk^{15,16}

- One of the most commonly detected and abundant HMOs in human milk^{9,17-21}
- May support the immune response²³⁻²⁴
- Stimulates the growth of beneficial bacteria, including bifidobacteria^{22,25-27}

HMO functionality is structure-specific: not all HMOs serve the same purpose^{23,24}

Potential functional benefits of GlyCare® LNT, as demonstrated primarily in pre-clinical studie



- May benefit gut health by supporting a favorable microbiome^{22,25-27}



- Emerging evidence suggests a possible role in deflecting the adhesion of certain undesirable micro-organisms to specific human cells²⁸⁻³¹
- In vitro evidence suggests LNT may hinder the growth of the undesirable micro-organism group B Streptococcus²⁴



Breastmilk – the gold standard

Breastmilk provides nutrients that are vital for an infant's growth and development and sets the standard in infant feeding.^{32,33} Human milk oligosaccharides (HMOs) are the third largest solid component of human milk after lipids and lactose and a key differentiating feature between human milk and cow's milk. The unique structure, concentration, and variety of oligosaccharides in human milk sets them apart from those found in cow's milk.^{34,35} Differences in health outcomes between breastfed and formula-fed infants may partly be explained by these features.^{8,34,36,37}

HMOs stimulate the growth of beneficial bacteria

- When ingested, HMOs resist digestion and reach the colon mostly intact^{35,37}
- By selectively feeding the gut with beneficial bacteria, HMOs enhance the growth of helpful bacteria like bifidobacteria and limit the nutrient supply for undesirable organisms^{25,35,38}
- HMOs also support production of short chain fatty acids and other metabolites that work to create a community of healthy microbes in the GI tract³⁹⁻⁴²

GlyCare® DFL product information

- 5 years of shelf life from production date
- Purity levels range from 70%
- White, homogenous, amorphous powder with a neutral to slightly sweet taste
- Contains up to 12% lactose[§]
- Manufactured without contact to latex, bisphenol A, or phthalates
- This product is free from:
 - Animal derived ingredients (ADI), Allergens (except milk),[§] Genetically modified organisms (GMO)[¥]

§ according to EC regulation 1169/2011 annex II

¥ according to EC regulation 1829/2003 and 1830/2003



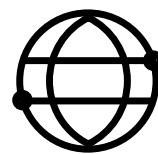
Broad product portfolio and a leading HMO innovator



Proven, reliable supply that scales with you



Highest safety and quality standards



Largest global market access: 160+ countries*

* We are continuously expanding our global approval footprint across application areas. For more details, please ask for our Regulatory Overview.

For more information, get in touch with your dsm-firmenich representative, or visit www.dsm-firmenich.com/health-nutrition-care

dsm-firmenich GlyCare® HMOs are produced to the highest quality of certifications, approvals, and procedures



ISO
9001:2015



FSSC
22000



SMETA



Halal



Kosher

The full GlyCare® HMO portfolio

- GlyCare® 2FL
- GlyCare® LNnT
- GlyCare® 2FL/DFL
- GlyCare® 6SL
- GlyCare® 3SL
- GlyCare® LNT
- GlyCare® 3FL
- GlyCare® LNFP I

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