

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 milk<sup>1-6</sup>

### Abundance and diversity in human milk

- 3rd largest component of human milk<sup>7</sup>
- >200 different HMOs identified in human milk, a diversity not seen in other animal milks<sup>4-6</sup>
- Variation occurs over lactation period, by maternal genetics, geographic region, and ethnicity<sup>8,9,25</sup>

### Complex structures with potential functional benefits

- Help establish a balanced early-life microbiota<sup>10,11</sup>
- Contribute to immune system support<sup>12-16</sup>

### Lacto-N-tetraose (LNT): A neutral-core HMO found in both colostrum and mature milk<sup>15,16</sup>

- One of the most commonly detected and abundant HMOs in human milk<sup>9,17-21</sup>
- May support the immune response<sup>23-24</sup>
- Stimulates the growth of beneficial bacteria, including bifidobacteria<sup>22,25-27</sup>

**HMO functionality is structure-specific: not all HMOs serve the same purpose<sup>23,24</sup>**

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



- May benefit gut health by supporting a favorable microbiome<sup>22,25-27</sup>



- Emerging evidence suggests a possible role in deflecting the adhesion of certain undesirable micro-organisms to specific human cells<sup>28-31</sup>
- In vitro evidence suggests LNT may hinder the growth of the undesirable micro-organism group B Streptococcus<sup>24</sup>



## Breastmilk – the gold standard

Breastmilk provides nutrients that are vital for an infant's growth and development and sets the standard in infant feeding.<sup>32,33</sup> 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.<sup>34,35</sup> Differences in health outcomes between breastfed and formula-fed infants may partly be explained by these features.<sup>8,34,36,37</sup>

## HMOs stimulate the growth of beneficial bacteria

- When ingested, HMOs resist digestion and reach the colon mostly intact<sup>35,37</sup>
- 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<sup>25,35,38</sup>
- HMOs also support production of short chain fatty acids and other metabolites that work to create a community of healthy microbes in the GI tract<sup>39-42</sup>

## 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<sup>§</sup>
- Manufactured without contact to latex, bisphenol A, or phthalates
- This product is free from:
  - Animal derived ingredients (ADI), Allergens (except milk),<sup>§</sup> Genetically modified organisms (GMO)<sup>¥</sup>

§ according to EC regulation 1169/2011 annex II

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



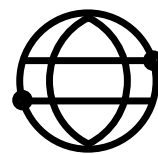
Broad product portfolio and a leading HMO innovator



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](http://www.dsm-firmenich.com/health-nutrition-care)

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



ISO  
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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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