

Product information

Leaflet

# GlyCare™ LNnT

One of the most abundant  
neutral core HMOs in  
human milk

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) are all about human-derived benefits for humans

### 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 in concentration and diversity occurs over lactation period, by maternal genetics, geographic region, and ethnicity<sup>8,9</sup>

### Lacto-N-neotetraose (LNnT): Complex structures with potential functional benefits

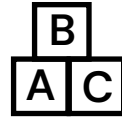
- Help establish a balanced early-life microbiota<sup>10,11</sup>
- Contribute to immune system support<sup>12,13</sup>



## Potential functional benefits of GlyCare™ LNnT, as demonstrated primarily in pre-clinical studies



- A combination of GlyCare™ 2FL and GlyCare™ LNnT may reduce incidence of colic in infants born via cesarean section<sup>14</sup>



- Helps balance gut microbiota by stimulating growth of beneficial bacteria<sup>15-17</sup>
- May help develop and mature the infant's gut<sup>18</sup>



- May help support normal immune function<sup>19-21</sup>
- In a clinical study supplementing infant formula with GlyCare™ 2FL and GlyCare™ LNnT, there were significantly fewer parental reports of bronchitis, lower respiratory tract infections, and antipyretic and antibiotic use<sup>14</sup>

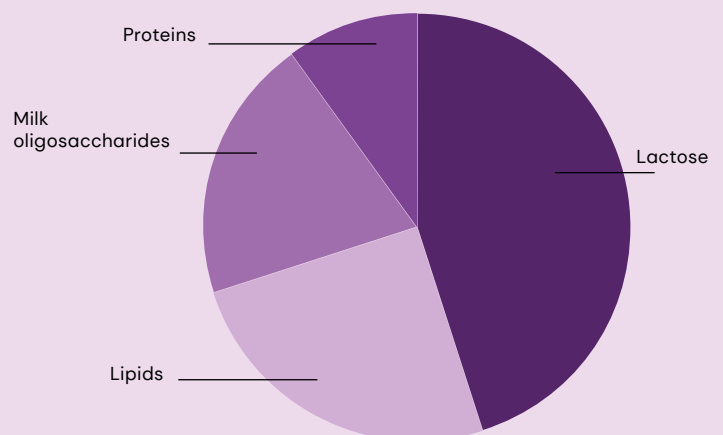


- May support normal gut barrier function<sup>18</sup>

## Breastmilk – the gold standard

The best nutrition for infants is a mother's breastmilk, which includes essential nutrients important for an infant's growth and development. Recent research shows that one of the largest differentiating features of breastmilk compared to cow's milk-based infant formula is the concentration and variety of milk oligosaccharides.<sup>18</sup> Until recently, HMOs have not been part of infant formula.

You can see the macronutrients composition in human milk in the chart to the right:



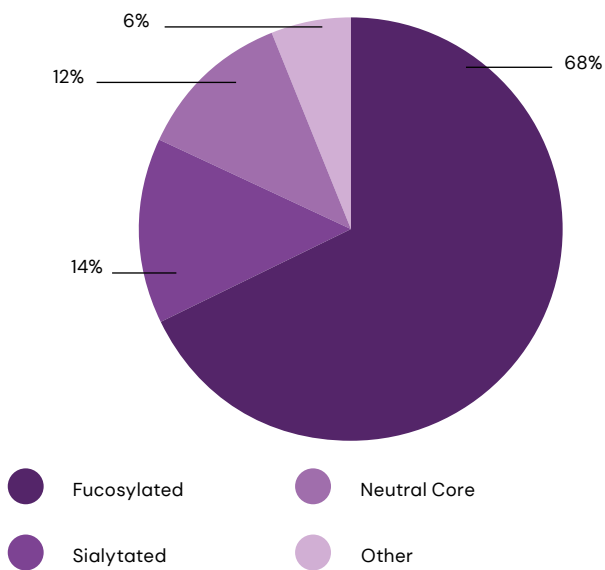
## 2'FL and LNnT promote a healthy start in life for infants

2'FL is the most abundant fucosylated HMO in breastmilk and LNnT is one of the most abundant neutral core HMOs in breastmilk. Together, these two HMOs have been shown to impact infant health and positively modulate the gut microbiota to a profile similar to breast fed infants.<sup>8,12</sup>

Supplementation with GlyCare™ 2FL and GlyCare™ LNnT may help support a normal immune system.<sup>12</sup>

## Three major classes defined by nature of their structure

Weighted median in mature milk (g/L)



## GlyCare™ DFL product information

- 5 years of shelf life from production date
- Purity levels range from 96–98% depending on the variant
- Available in different variants such as KfP, hypoallergenic, crystallized and amorphous powder
- White, homogenous powder with a neutral to slightly sweet taste
- 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>
- Contains up to 3% lactose<sup>§</sup>

§ according to EC regulation 1169/2011 annex II

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



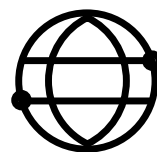
Broad product portfolio and a leading HMO innovator



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  
9001:2015



FSSC  
22000



SMETA



Halal



Kosher

## The full GlyCare™ HMO portfolio

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

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