

Product information

Leaflet

GLYCARE® LNFP-I

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 in concentration and diversity occurs over lactation period, by maternal genetics, geographic region, and ethnicity^{8,9}

Complex structures with potential functional benefits

- Help establish a balanced early-life microbiota^{10,11}
- Growing evidence suggests a link between the gut microbiota and the immune system^{12,13}
- Contribute to immune system support¹⁴⁻¹⁸

Lacto-N-fucopentaose I (LNFP-I) may offer early protection to newborns¹⁸

- In certain women, LNFP-I appears in colostrum in higher concentrations than other HMOs.^{20,21} Colostrum, produced in the first few days after birth, plays a role in supporting early immune development.^{22,23}
- LNFP-I contributes significantly to HMO composition in the milk of most women.²⁴⁻²⁷

HMO functionality is structure-specific: not all HMOs serve the same purpose^{28,29}

Potential functional benefits of GLYCARE[®] LNnT, as demonstrated primarily in pre-clinical studies



- May offer gut health benefits by contributing to a diverse microbiome³⁰



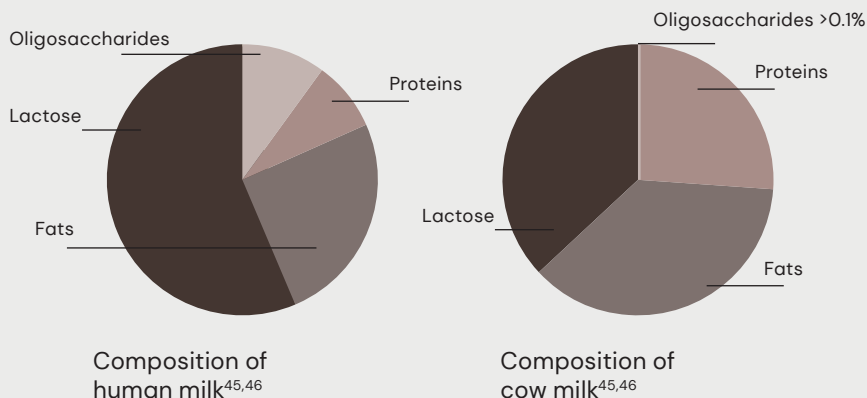
- Stimulates the growth of beneficial bacteria, including bifidobacteria^{31,32}
- May support a normal immune response³³⁻³⁵



- Potentially deflects undesirable micro-organisms from attaching to the intestinal cell wall^{33,37,38}
- In vitro evidence suggests LNFP-I may hinder the growth of the undesirable micro-organism group B Streptococcus³⁶

Breastmilk – the gold standard

Breastmilk provides nutrients that are vital for an infant's growth and development and sets the standard in infant feeding.^{39,40} 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.^{41,42} Differences in health outcomes between breastfed and formula-fed infants may partly be explained by these features.^{8,41,43,44}



HMOs may deflect adhesion of undesirable organisms to cell walls

- The adhesion of undesirable microbes to cell walls may be the first step in colonization of these organisms in the body. This may lead to an unfavorable abundance of non-commensal microbes, which could disrupt certain elements of human health^{13,47}
- Preclinical evidence and human observational studies suggest HMOs may help deflect adhesion of undesirable microbes to the cell wall by acting as decoy receptors, mimicking cell surface receptors^{36,48-51}

GLYCARE® DFL product information

- 5 years of shelf life from production date
- Purity levels for combined 2'FL and LNFP-I from 75%
- White, homogenous, amorphous powder with a neutral to slightly sweet taste
- Contains up to 10% 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



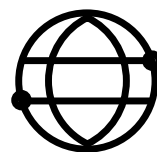
Broad product portfolio and a leading HMO innovator



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

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

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