

Product information
Leaflet

GLYCARE® 2FL

The most abundant
fucosylated HMO
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): 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}
- Contribute to immune system support¹²⁻¹⁶

Of all HMOs, 2'-Fucosyllactose (2'FL) is the most abundant in human milk*†

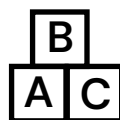
- Found in the milk of most of lactating women^{8,9}
- May play a role in digestive and immune health^{13,17,18}

* Around 2g/L. † Presence of 2FL is dependent upon maternal genotype and, thus, may be population specific.

Potential functional benefits of GLYCARE® 2FL, as demonstrated in pre-clinical and clinical trials



- A combination of GLYCARE® 2FL and GLYCARE® LNnT may reduce incidence of colic in infants born via cesarean section¹⁹
- Emerging science suggests a potential role in normal gut motility²⁰



- Emerging evidence suggests a potential role in cognitive development²¹⁻²³
- Helps balance gut microbiota by stimulating beneficial bacteria such as bifidobacteria²⁴



- Emerging scientific evidence suggests a potential positive role in inflammation^{25,26}
- In a clinical study supplementing infant formula with GLYCARE® 2'FL and GLYCARE® LNnT, there were significantly fewer parental reports of bronchitis, lower respiratory tract infections, and antipyretic and antibiotic use¹⁹
- May help support a normal immune system^{27,28}

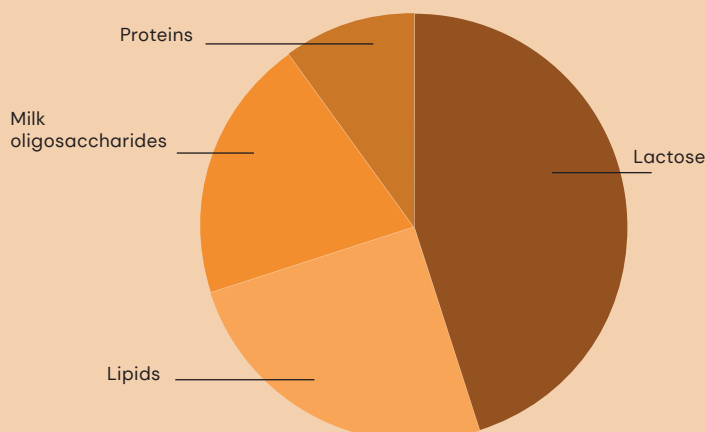


- May support gut barrier function^{29,30}
- May help support normal immune function^{17,31}

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.³² 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:



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),[§] Genetically modified organisms (GMO)*
- Contains up to 3% lactose[§]

[§] according to EC regulation 1169/2011 annex II

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



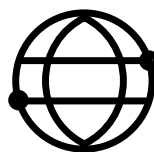
Broad product portfolio and a leading HMO innovator



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 our website www.dsm.com/human-nutrition

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



The full GLYCARE® HMO portfolio

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

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