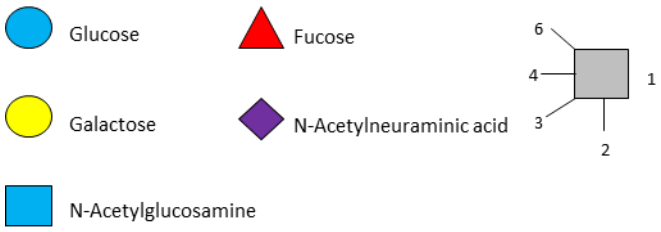
HMO Library

HMO library

Glycom/DSM human milk oligosaccharide (HMO) library contains around 20 different HMO structures and mixtures. Some of these HMOs are produced in the large-scale manufacturing facility, while others are produced in our R&D lab. Our HMO library is always expanding, and resources are dedicated to make new structures available.

HMO structures

All HMOs derive from lactose (galactosyl-β1-4-glucose) and can be extended by four monosaccharides: N-acetyl-D-glucosamine (GlcNAc), D-galactose (Gal), sialic acid (Neu5Ac) and/or L-fucose (Fuc). GlcNAc and galactose are added in specific order and linkages to form the neutral-core structures. While Neu5Ac and Fuc can be present on the terminal positions of either lactose or the core structures, forming sialylated and fucosylated groups[1].

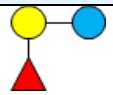
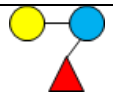
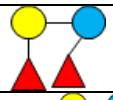
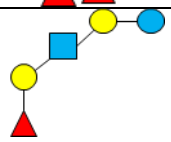
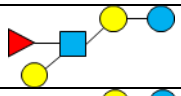
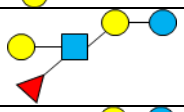
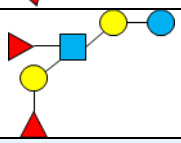
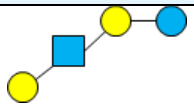
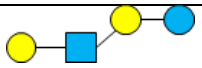
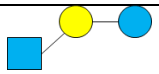
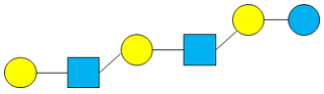


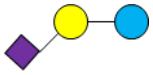
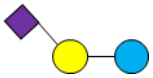
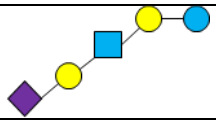
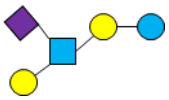
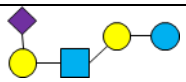
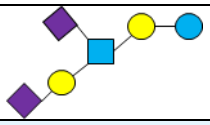
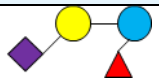
HMOs can be classified into three fundamental structure classes: (1) **neutral-core HMOs** (containing GlcNAc), (2) **neutral fucosylated HMOs** (containing fucose), and (3) **acidic HMOs** (acidic fucosylated and acidic nonfucosylated) (containing sialic acid).

Below you can see information which HMOs are currently available. Larger than 1 kg donation of a single HMO is upon request.

[1] Soyyilmaz B. *et al.*, Systematic review of HMO concentrations in human milk throughout lactation, Nutrients, 2021.

Please contact HMO.Donation@dsm.com

HMOs available for donation		
Abbreviation	**Name**	**Structure**
Neutral fucosylated HMOs		
2'FL	2'-Fucosyllactose	
3FL	3-Fucosyllactose	
DFL	Difucosyllactose	
LNFP-I	Lacto-N-fucopentaose I	
LNFP-II	Lacto-N-fucopentaose II	
LNFP-III	Lacto-N-fucopentaose III	
LNDFH-I	Lacto-N-difucohexaose I	
Neutral-core HMOs		
LNT	Lacto-N-tetraose	
LNnT	Lacto-N-neotetraose	
LNT-II	Lacto-N-triose II	
pLNnH	para-Lacto-N-neohexaose	

HMOs available for donation		
Abbreviation	**Name**	**Structure**
Acidic HMOs		
3'SL	3'-Sialyllactose	
6'SL	6'-Sialyllactose	
LST a	Sialyllacto-N-tetraose a	
LST-b	Sialyllacto-N-tetraose b	
LST c	Sialyllacto-N-tetraose c	
DS-LNT	Disialyllacto-N-tetraose	
Acidic fucosylated HMOs		
FSL	Fucosylsialyllactose	

HMO mixtures available for donation	
Abbreviation	**Composition**
2'FL/DFL	81.5 / 13.3 w/w%
LNFP-I/2'FL	57.4 / 31.3 w/w%
LNnT/pLNnH/LNT-II	71.2 / 11.7 / 5.0 w/w%