FrieslandCampina

Ingredients

product data sheet

Vivinal® GOS Syrup

Vivinal GOS Syrup is a liquid galacto-oligosaccharide ingredient. Scientific studies have shown positive effects of oligosaccharides, among which galacto-oligosacchrides, on growth of bifidobacteria[1,2], stool consistency[3,4], bowel function and transit time[5,6], support of natural defences[7-10] and mineral absorption[11-13].

Product characteristics

Vivinal GOS Syrup is an ingredient rich in non-digestible galacto-oligosaccharides (GOS), produced from high quality lactose using a proprietary enzymatic production technology.

Application

Vivinal GOS Syrup is used world-wide as an ingredient for standard and premium infant formulas, follow-on formulas and growing-up milk. Scientific studies have shown positive effects of oligosaccharides, among which GOS, on growth of bifidobacteria[1,2], stool consistency[3,4], bowel function and transit time[5,6], support of natural defences[7-10] and mineral absorption[11-13].

The taste of Vivinal GOS Syrup can be characterized as slightly sweet. Vivinal GOS Syrup is heat and acid stable and has excellent solubility properties. These properties make application possible in a wide product range such as infant and follow-on formula and growing-up milk.

Packaging

Vivinal GOS Syrup is packed in a 1,000 l PE-container and contains 1,200kg of product.

The handling of Vivinal GOS Syrup is comparable to glucose syrup, meaning that viscosity is the most important parameter to take into account when emptying.

Shelf life and storage conditions

Vivinal GOS Syrup is stable during long-term storage. Both the oligosaccharide content and the product characteristics making Vivinal GOS Syrup unique remain unchanged (no degradation) for at least 18 months when stored under clean, dry and dark conditions and separated from strongly odorous materials.

DOMO®

Vivinal® GOS Syrup
product data sheet

Typical analysis*

Chemical	
Dry matter (dm)	75%
Galacto-oligosaccharides	59% on dm
Nitrogen	Max. 0.032% on dm
Sulphated ash	Max. 0.3% on dm
Lactose	21% on dm
Glucose	19% on dm
Galactose	1% on dm
Nitrite	Max. 2 ppm on dm
pH	3.2

Microbiological	
Total plate count 30°C	Max. 500 cfu/g
Enterobacteriaceae	Absent in 1g
E. coli	Absent in 5g
Yeasts	Max. 15 cfu/g
Moulds	Max. 15 cfu/g
Staphylococci coagulase-positive	Absent in 1g
Salmonella	Absent in 125g

Sensoric	
Appearance	Clear to slightly yellowish syrup
Taste	Slightly sweet

Minerals (mg/100g)	
Calcium	Max. 1
Sodium	Max. 3
Magnesium	Max. 0.1
Potassium	Max. 2
Chloride	Max. 5
Phosphorus	Max. 1

Nutritional	
Energy (kcal/100g)**	240
Total fat (g/100g)	0
Saturated (g/100g)	0
Trans (g/100g)	0
Cholesterol (mg/100g)	0
Total carbohydrate (g/100g)	75.2
Galacto-oligosaccharides (g/100g)	44.3
Lactose (g/100g)	15.8
Glucose (g/100g)	14.3
Galactose (g/100g)	0.8
Fibre (g/100g)**	30.6
Total Protein (g/ 100g)	0

DP composition (on weight percentage of oligosaccharide)	
DP2 (other than lactose) (%)	31
DP3 (%)	38
DP4 (%)	18
DP5 (%)	8
DP6 and higher (%)	5
Total (%)	100

* Please refer to the specifications for guaranteed limits.
** According to EU legislation (EU/1169/2011)

As with any organic material, there may be some variation in the nutritional composition. The preceding values are being supplied to aid in development work, but should not be used solely to determine nutrient labelling. Analysis of nutrients as they occur in final products may be required by the Code of Federal Regulations, Title 21; section 101.9.

References

1. Ben XM, Li J, et al. World J Gastroenterol 2008;14(42):6564-6568.
2. Fanaro S, Marten B, et al. J Pediatr Gastroenterol Nutr 2009;48(1):82-88.
3. Williams T., Choe Y. et al. J. Pediatr Gastroenterol Nutr 2014;59(5);653-8.
4. Sierra C., Bernal MJ et al. Eur J Nutr 2015;54:89-99.
5. Costalos C, Kapiki A, et al. Early Hum Dev 2008;84(1):45-49.
6. Schmelze H, Wirth S, et al. J Pediatr Gastroenterol Nutr 2003;36(3):343-351.
7. Arslanoglu S, Moro GE, et al. J Nutr 2007;137(11):2420-2424.
8. Shoaf K, Mulvey GL, et al. Infect Immun 2006;74(12):6920-6928.
9. Bakker-Zierikzee AM, Tol EA, et al. Pediatr Allergy Immunol 2006;17(2):134-40.
10. Sinclair HR, de SJ, et al. J Agric Food Chem 2009;57(8):3113-3119.
11. Weaver CM, Martin BR, et al. J Agric Food Chem 2011;59(12):6501-6510.
12. Whisner C.M., Martin B.R. et al. Br J Nutr 2013;110(7):1292-1303.
13. Van den Heuvel E.G., Schoterman M.H.C. et al. J Nutr 2000;130(12):2938-2942.

Potential consumer benefits are not to be considered as health claims. They should be considered as potential leads that might be developed into health claims complying with the local legal requirements.

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