

Galacto-oligosaccharides (GOS)

Product Definition

Galacto-oligosaccharides (GOS) are non-digestible oligosaccharides consisting of 1 to 9 galactose units linked via glycosidic bonds to either terminal glucose or galactose. It is obtained by subjecting a concentrated lactose solution to the action of a β -galactosidase enzyme to produce galacto-oligosaccharides and further terminating the reaction. The galacto-oligosaccharides may be purified via ultrafiltration, chromatography, ion exchange, electro dialysis, activated carbon filtration or any other safe and suitable process in which all or part of the galacto-oligosaccharides, minerals, other sugars are concentrated into a viscous syrup or powder.

The acidity of GOS may be adjusted by the addition of safe and suitable pH adjusting ingredients. GOS for human consumption complies with all provisions of the U.S. Federal Food, Drug, and Cosmetic Act.

Composition

Several GOS products are commercially available. These may include:

Product	GOS % composition in solids content	Protein %	Lactose %	Sulphated Ash %	Moisture %
GOS Syrup*	50 min	0.7 max**	24 max**	0.5 max**	28 max
GOS Powder	28.5 min	0.7 max	30 max	0.5 max	4.5 max

*This also includes Organic GOS syrup.

** on "Dry Basis"

Microbiological Standards and methods of Analysis

Parameter	Standard	Test Method
Standard Plate Count	3000 cfu/g max	AOAC 966.23
Enterobacteriaceae	10 cfu/g max	FDA BAM
<i>Escherichia coli</i>	10 cfu/g max	FDA BAM
Yeast/Mold	100 cfu/g max	FDA BAM
Salmonella	Negative in 25 g	FDA BAM
<i>Staphylococcus aureus</i>	10 cfu/g max	FDA BAM
Dry Matter	See composition table above	Vacuum oven solids
Protein	See composition table above	17 th ed. SM 15.132 (Kjeldahl)
Sulphated Ash	See composition table above	USP/NF Current Version
Lactose	See composition table above	AOAC 984.15
GOS	See composition table above	AOAC 2001.02

Other characteristics

Viscosity: 1000-5000 cps at 25C
Color: Colorless to light tan/yellow viscous syrup, White (Powder)
Flavor: Slightly sweet
pH: 2.8-3.8 (Syrup); 2.8-5.5 @ 10% solution (Powder)

Product labeling

Galacto-oligosaccharides

Product naming

Provided that this product meets the Product Definition, the name of the products is “Galacto-oligosaccharides Syrup” Or GOS powder.

Product Applications and Functionality

Infant formulas and conventional foods like soups, bakery products, cereals, jellies, jams and fruit and vegetable juices. Also in nutritional and dietary supplements, medical and specialized nutrition, and pharmaceutical applications.

Storage and shipping

Product should be stored in original container in a clean, dry, odor-free environment, under normal storage conditions at room temperature. Stocks should be rotated and utilized within 1-2 years.

Packaging

Intermediate bulk container or any other suitable food grade closed container.