

Lactose

Production site: Denmark Protein



Description

Lactose is a carbohydrate derived from milk suitable for standard food applications. It fulfills international quality standards such as CODEX for lactose, ensuring food safety at all times.

Product application

- Milk formula
- Beverages
- Confectionery
- Culinary
- Fine bakery

Properties

- Meets CODEX requirements for lactose
- High purity and uniform chemical composition
- Fine and homogeneous particle size distribution
- Excellent powder properties: non hygroscopic, free flowing
- The product is available in Kosher, Halal, and vegetarian

Chemical specifications

Protein (Nx6.38) as is	Max. 0.2%
Lactose monohydrate as is	Min. 99.0%
Sulphated ash	Max. 0.3%
Moisture at 87°C	Max. 0.2%
Total water	Max. 5.2%
Riboflavin	Max. 0.2mg/100g

Physical specifications

pH (10% solution – ambient temp.)	5.0-7.0
Bulk density	
- Unmilled	0.8-1.0g/cm ³
- 100 mesh	0.8-1.0g/cm ³
- 200 mesh	0.7-0.9g/cm ³
Solubility (10% solution – ambient temp.)	Clear
Scorched particles	Equal to A
Colour	White/Cream
Flavour/Odour	Free from foreign odour and flavours
Taste	Free from foreign taste
Appearance	Free flowing powder

Particle distribution

Unmilled	
100 mesh	>150µm; Max. 5%
200 mesh	>75µm; Max. 5%

Microbiological specifications

Total plate count (30°C aerobic)	Max. 2500/g
Enterobacteriaceae	Max. 10/g
Enterobacteriaceae pre-enrichment	Max. 40% positive
Enterococci	Max. 100/g
Yeast and mould	Max. 100/g
Sulphite reducing clostridia	Max. 30/g
Bacillus cereus	Max. 100/g
Escherichia coli	Absent in 1g
Listeria monocytogenes	Absent in 25g
Salmonella	Absent in 125g
Staphylococcus aureus coagulase +	Absent in 1g

Microbiological sampling and limits

Total plate count (30°C aerobic)	m=1000/g; M=2500; n=5; c=1
Enterobacteriaceae	m=10/g; n=1
Enterobacteriaceae pre-enrichment	m=negative/10g; M=positive/10g; n=10; c=4
Enterococci	m=50/g; M=100/g; n=5; c=1
Yeast and mould	m=10/g; M=100/g; n=5; c=1
Sulphite reducing clostridia	m=10/g; M=30/g; n=5; c=1
Bacillus cereus	m=50/g; M=100/g; n=5; c=1
Escherichia coli	Absent in 1g; n=1
Listeria monocytogenes	Absent in 25g; n=1
Salmonella	Absent in 125g; n=1
Staphylococcus aureus coagulase +	Absent in 1g; n=1

Nutritional data

Energy per 100g	1700kJ/400kcal
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Packaging

Small bags

- 25 kg easy-open strippable bag allowing easy separation of the inner liner
- Multilayer bag with integrated, heat-sealed PE liner for maximum product protection

Big bags

- Up to 1000 kg big bag, with integrated PE liner
- Permanently antistatic to eliminate the risk of dust explosions

Storage

Store in closed bags in a cool and dry environment below 25°C and below 65% relative humidity.

Shelf Life

24 months if kept under the prescribed storage conditions.

Legal references

The product is manufactured, packaged and labelled according to the relevant EU regulations for food and food ingredients, and/or FAO/WHO Codex Alimentarius, when relevant. This includes that the milk/milk constituents used as raw material originate from healthy cows. The milk used in the production is included in monitoring programs for undesirable substances, as required by regulations or HACCP-based risk assessment. The production plants are approved by the competent authorities and included in the EU-register of approved food establishments.

For products manufactured outside EU the products comply with relevant regulations in the country where the product is produced.

GMO policy

Arla Foods' objective is to avoid genetically modified ingredients in our products. The requirements we have established for our suppliers ensure that only non-GMO raw materials are used during production of our products. Therefore, our products and the raw materials used, do not contain, consist of or are produced from GMOs as defined in regulation (EC) No 1829/2003, and they do not contain ingredients produced from GMOs. Therefore, our products do not need labelling according to Regulation (EC) No 1829/2003 and 1830/2003.

For the definition of GMOs, we refer to EU Directive 2001/18/EC.

Allergens

The table below indicates the presence (as added component) of the following allergens and products thereof:

YES	NO	ALLERGENS	DESCRIPTION OF COMPONENTS
	●	Cereals containing gluten and products thereof	
	●	Crustaceans and products thereof	
	●	Eggs and products thereof	
	●	Fish and products thereof	
	●	Peanuts and products thereof	
	●	Soya beans and products thereof	
●		Milk and products thereof (including lactose)	Bovine milk
	●	Nuts	
	●	(Tree) Nuts and products thereof	
	●	Celery and products thereof	
	●	Mustard and products thereof	
	●	Sesame seeds and products thereof	
	●	Sulphur dioxide and sulphites (>10 mg/kg)	
	●	Lupin and products thereof	
	●	Molluscs and products thereof	



Method of analysis

CHEMICAL SPECIFICATIONS

Protein (Nx6.38)	ISO 8968-3:2004(E)/IDF 20-3:2004
Lactose monohydrate	Polarimetric method
Sulphated ash	European Pharmacopeia method 7.2 (Method 2.4.14 Sulphated Ash)
Moisture	Free water method
Total water	Karl Fisher method
Riboflavin	HPLC, En 14152

PHYSICAL SPECIFICATIONS

pH (10% solution)	ISO 7238:2004(E)/IDF 104:2004(E) or IDF 155/ISO 5546 2nd ed. 2010-06-01
Bulk density	IDF 134:2005 / ISO 8967:2005, 625 stamp
Solubility	Method to be defined
Scorched particles	ADPI 916:2002 50g dry powder
Colour	Comparison to reference sample
Flavour/Odour	Comparison to reference sample
Taste	Comparison to reference sample
Appearance	Comparison to reference sample
Particle distribution	Sieve analysis

MICROBIOLOGICAL SPECIFICATIONS

Total plate count (30°C aerobic)	ISO 4833:2003(E)
Enterobacteriaceae	ISO 21528-2:2004
Enterobacteriaceae pre-enrichment	ISO 21528-1:2004(E)
Enterococci	NMKL No. 68:5th Ed. 2011
Yeast and mould	ISO 6611:2004
Sulphite reducing clostridia	ISO 15213: 2003 Anaerobic sulphite- reducing bacteria
Bacillus cereus	ISO 7932:2004
Escherichia coli	ISO 21528-1:2004*
Listeria monocytogenes	ISO 11290-2:1998
Salmonella	ISO 6579:2002
Staphylococcus aureus coagulase +	ISO 6888-1:1999/Amd.1:2003

* Escherichia coli is analysed according to method ISO 21528-1: 2004. E. coli is part of the enterobacteriaceae group. Findings will be verified for E. coli according to the method description.



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