

# Lyofast LC 4P1

**Description** Lyofast LC 4P1 consists of a blend of *Lactobacillus casei* strains inhibiting *Clostridium* spp and so inhibiting butyric fermentation in cheese when used as adjunct culture and growing as secondary flora or NSLAB in cheese. Lyofast LC 4P1 has been developed by the team of Prof. Ylva Ardoe at KU Life.

**Application** Sprinkle the culture powder directly into process milk under aseptic conditions ensuring that the culture is well dispersed by gentle stirring. The culture is applied as a protective culture as follows:

Product	Dose/100 l Product	Dose/100 l
Semi-hard cheese	1 (min. 0,2) Hard cheese	1 (min. 0,2)
Soft cheese	1 (min. 0,2) Semi-soft cheese	1 (min. 0,2)

**Culture information** Inoculation guideline: 1 dose/100L giving  $5 \times 10^5$ /ml cheese milk (min.  $1 \times 10^5$ /ml milk of each strain). Data are obtained under standardised laboratory conditions, and consequently, should be considered as guidelines.

Optimal temperature for growth	25-45 °C
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**Storage** Unopened pouches should be kept at or below -18°C.

**Package data** The freeze-dried culture is packed in waterproof and airproof aluminium pouches. The packaging material is food grade. Lyofast LC 4P1 is available in 5, 10 and 50 dose.

**Shelf life** 18 months when stored at or below -18°C. The shelf life includes up to 14 days of shipment at temperatures below 30°C.

**Heavy metal specification**

Pb (lead)	< 1 ppm
Hg (mercury)	< 0.03 ppm
Cd (cadmium)	< 0.1 ppm

**Microbiological specification**

<i>Bacillus cereus</i>	<100 CFU/g	Method: Sacco M10 (1)
Coagulase positive staphylococci*	<10 CFU/g	Method: Sacco M11(2)
Enterobacteriaceae	<10 CFU/g	Method: Sacco M2 (3)
<i>Escherichia coli</i>	<1 CFU/g	Method: Sacco M27 (4)
<i>Listeria monocytogenes</i> *	Not detected in 25 g	Method: Sacco M13 (5)
Moulds & yeasts	<10 CFU/g	Method: Sacco M3 (6)
<i>Salmonella</i> spp*	Not detected in 25 g	Method: Sacco M12 (7)

\* Analysed on regular basis. All analytical methods are available upon request.

(1)ISO 7932; (2)ISO 6888-1-2; (3)ISO 215281-2; (4)ISO 11866-1-2/IDF 170-1-2; (5)ISO 11290-1-2; (6)ISO 6611/IDF 94; (7)ISO 6785/IDF 93;

**GMO** The microbial strains are not genetically modified (GMO) in accordance with the European Directive 2001/18/CE. The strains are isolated from natural sources. The raw materials used are also GMO free in accordance with Regulation (EC) No. 1829/2003 and Regulation (EC) 1830/2003. Statement available upon request.

**Allergens** The raw materials used are generally based on dairy ingredients. All materials are free of the following components and their derivatives: peanut, tree nut, sesame, egg, fish, shellfish, mollusc, crustacean, sulphite, cereals containing gluten, celery, mustard, soy and lupine. Statement available upon request.

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**Safety information** Material Safety Data Sheet available on [www.saccosrl.it](http://www.saccosrl.it)

**Certificate** Lot certificate available upon request.

**ISO** Sacco S.r.l. is UNI EN ISO 9001:2008 certified since 1998. Sacco cultures are generally Kosher approved except for surface ripening cultures.

**Kosher approval**

**Service** Please contact your distributor for guidance and instructions for your choice of culture and processing. Information about additional package sizes and sales units is also available upon request.

**Liability** This information is based on our knowledge trustworthy and presented in good faith. No guarantee against patent infringement is implied or inferred.