

Lyofast EF 1

Description **Lyofast EF 1** consists of *Enterococcus faecium* which may be applied complementary to enhance cheesy flavour. Furthermore, Lyofast EF 1 may be applied in probiotic products such as fermented milk products.

Application Inoculation guideline for dairy application: sprinkle the culture powder directly into process milk under aseptic conditions ensuring that the culture is well dispersed by gentle stirring.

Product	Dose/100 l Product	Dose/100 l
Soft cheese	0.2-5.0	Hard cheese 0.2-0.3
Semi-hard cheese	0.2-5.0	

Culture information Inoculation guideline for probiotic application: 1 dose is 10^{11} CFU and inoculated in 100 l milk 1 dose gives approx. 10^6 CFU/ml milk.

Optimal temperature for growth	25-45 °C	Acid tolerance	+++
Bile tolerance	+++	Adhesion test	++

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. Lyofast EF 1 is available in 10 and 50 UC. The packaging material is food grade.

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 spp</i> *	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.

Safety information Material Safety Data Sheet available on www.saccosrl.it

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Certificate	Lot certificate available upon request.
ISO Kosher approval	Sacco S.r.l. is UNI EN ISO 9001:2008 certified since 1998. Sacco cultures are generally Kosher approved except for surface ripening cultures.
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.