

# Lyofast PB 1

## Technical Data Sheet

### General information

#### Description

Lyofast PB 1 consists of selected strains of *Propionibacterium freudenreichii* ssp. *shermanii*. Lyofast PB 1 may be applied to produce big-eyed hard cheese such as Emmentaler and Swiss cheese types. Lyofast PB 1 ferments lactose and lactate producing carbon dioxide, propionic acid, and acetic acid. Lyofast PB 1 might be used in combination with other Lyofast cultures.

#### Application

For high inoculation levels sprinkle the culture powder directly into process milk under aseptic conditions ensuring that the culture is well dispersed by gentle stirring. For lower inoculation levels disperse the culture powder in milk or water, add approximately the same temperature as the process milk and apply under aseptic conditions ensuring that the culture is well dispersed by gentle stirring. The following may be used as inoculation guidelines:

Product	Dose/100 l	Product	Dose/100 l
Semi-hard cheese	0.5-1.0	Hard cheese	0.1-0.2
Semi-hard cheese, bactofugated	1.0-2.0	Hard cheese, bactofugated	0.5-1.0

#### Technical Information

1 dose is  $10^{10}$  CFU and inoculated in 100 l of milk 1 dose gives approx.  $10^5$  CFU/ml milk. Data are obtained under standardised laboratory conditions, and consequently, should be considered as guidelines.

Trait	Result
Optimal temperature for growth	15-30 °C (59-86 °F)
Scalding temperature	Max. 54 °C (129.2 °F)
Gas production/citrate/urea	High T°C / +++
Gas production/citrate/urea	Low T°C / +

### Microbiological specifications

Assay	Result	Method (Reference)
<i>Bacillus cereus</i>	< 100 CFU/g	M10 (ISO 7932)
Coagulase positive staphylococci*	< 10 CFU/g	M11 (ISO 6888-1-2)
Enterobacteriaceae	< 10 CFU/g	M02 (ISO 21528-1-2-3)
<i>Escherichia coli</i>	< 1 CFU/g	M27 (ISO 11866-1-2/IDF 170)
<i>Listeria monocytogenes</i> *	Not detected in 25 g	M13 (ISO 11290-1-2)
Yeast and mould	< 10 CFU/g	M03 (ISO 6611/IDF 94)
<i>Salmonella</i> spp.*	Not detected in 25 g	M12 (ISO 6785/IDF 93)

\* Analyzed on a regular basis. Analytical methods are available upon request.

### Safety information

#### Heavy metal analysis

Heavy metal*	Amount (ppm)
Pb (lead)	< 1 ppm
Hg (mercury)	< 0.03 ppm
Cd (cadmium)	< 0.1 ppm

\* Analyzed on a regular basis.

<b>Safety sheet</b>	<p>This product is not hazardous; therefore provision of a Safety Data Sheet (SDS) is not mandatory (REACH Art. 31).</p> <p>A Safety Information Data Sheet has been made as a voluntary presentation of certain information that may assist the user in the handling. The safety information is available upon request.</p>
<b>GMO status</b>	<p>Sacco organisms are not genetically modified (GMO), in accordance to the European Directive 2001/18/EC.</p> <p>This product does not require labelling with regard to the use of GMO, in accordance to Regulation (EC) No. 1829/2003, and Regulation (EC) No. 1830/2003.</p>
<b>Allergens</b>	<p>The raw materials used are free of the following components and their products thereof: cereals containing gluten, crustaceans, eggs, fish, peanuts, soybeans, nuts, celery, mustard, sesame seeds, sulphur dioxide and sulphite, lupin and molluscs.</p> <p><b>This product contains MILK.</b></p> <p>The list of allergens is in compliance with Regulation (EC) 1169/2011.</p>
<b>BSE/TSE status</b>	<p>This product is considered safe with respect to bovine spongiform encephalopathy (BSE) or transmissible spongiform encephalopathies (TSEs) transmissions in accordance to Regulation EMA 410/01 rev. 3.</p>
<b>Other information</b>	
<b>Colorants</b>	<p>This product does not contain added colorants, in accordance to Regulation (EC) 1333/2008.</p>
<b>Packaging information</b>	<p>The freeze-dried culture is packaged inside waterproof and airproof pouches, consisting of three layers (in order, going inwards): polyester, aluminium, and polyethylene.</p> <p>The packaging material used is food grade.</p>
<b>Storage and shelf-life</b>	<p>Cultures should be preferably stored, at -18 °C (-0.4 °F), or below.</p> <p>Under these conditions and in the original sealed package, the shelf-life of the product is 18 months.</p>
<b>Certificate of analysis</b>	<p>Lot's certificate of analysis is available upon request.</p>
<b>Certifications</b>	
<b>General</b>	<p>Sacco S.r.l. is ISO 22000:2005 and FSSC 22000 certified since 2014. Certificates are available in the web site <a href="http://www.saccosystem.com">www.saccosystem.com</a>.</p>
<b>Kosher</b>	<p>Sacco cultures are generally Kosher approved. Please consult Certificates that are available in the web site <a href="http://www.saccosystem.com">www.saccosystem.com</a>.</p>
<b>Halal</b>	<p>Sacco cultures are generally Halal approved. Please consult Certificates that are available in the web site <a href="http://www.saccosystem.com">www.saccosystem.com</a>.</p>
<b>Service and technical support</b>	<p>This product complies the Russian GOST 34372-2017 standard.</p> <p>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.</p>

## Liability

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