

# LF 55

we are ingredients makers



*Lactobacillus fermentum* LF 55

## Speed up your cheese ripening

Semi-hard cheeses are very popular with consumers since their wide range of applications, they can be eaten as they are or included in many food preparations as ingredients.

The achievement of a long aged cheese profile over a limited slot of time is nowadays the challenge aiming to control the operating costs.

The ripening time is crucial to properly balance minerals, humidity and rate of proteolysis which are the main driver to get the right sensorial and rheological features.

**The usage of LF 55 with starter cultures can strongly improve the texture and flavours of semi-hard cheeses and sub-categories produced from low fat milk or milk fat substitutes which normally are limited in texture and flavours.**



### 4Protection for semi-hard cheeses

Semi-hard cheese often undergoes late-blowing. The spore-forming genera *Clostridia spp.* is the main cause. **LC 4PI** is an Anti-Clostridia key product due to its capability to produce bacteriocins which inhibits such spoiling microbial species. Furthermore the usage of **LC 4PI** turns your label preservatives free.

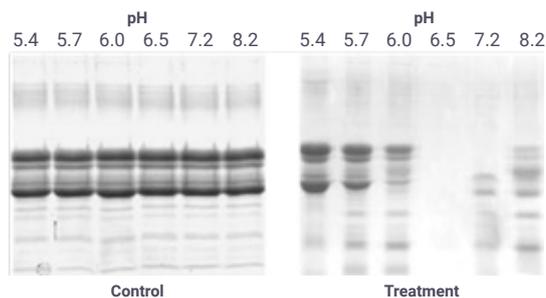


## Effect of pH on proteolytic activity

The extent of proteolysis is normally influenced by several factors such as temperature, water activity ( $A_w$ ), ionic strength and pH.

This latter is conducive to raise the casein degradation as it goes towards neutrality.

These findings convey confidence since the quite acid cheese pH allows the hydrolytic activity to be progressive and balanced.



SDS-PAGE profile of Na-caseinate hydrolyzed by *Lactobacillus fermentum* at different pH values after 24 h incubation at 37 °C

## *Lactobacillus fermentum* is:

- the major hetero-fermentative *Lactobacillus* species of the human gut and it is also widely employed in industrial fermentations as well as in starter cultures in the dairy industry
- part of the natural whey microflora commonly used to produce **Parmigiano Reggiano** and **Emmenthal**

## Suggested use

**Lyofast LF 55** is designed to promote the **cheese ripening** and to enhance the **small openness development** while aging.

The recommended dosage ranges from **0,3 to 0,5 doses for 100 litres of milk** and it may vary according to technologies and conditions.

**LF 55** can be inoculated along with your Starter so that any extra operation is required.

