Pasta filata cheese, like mozzarella, is used in a great number of applications: salads, pizzas, pastas, etc. It can take different forms depending on the application: hard to be shredded or grated, spreadable, sliced, etc.

Manufacturers want their cheese to be tasty but also to obtain a texture adapted to their needs.

Galactic led a study on shreddable mozzarella and developed ProDairy Adagio™ F, a pure lactic acid powder, which helps control the texture while improving the stability of the final product over time.

Advantages

- Good alternative to ferments
- Control of the texture
- Natural ingredient
- No organoleptic impact
- Time saving during process
- Stable pH
The properties of the final products such as meltability (an important feature of pizza toppings), spreadability, elasticity, viscosity, flavour, etc. are perfectly maintained or even improved by ProDairy Adagio™ F.

### Ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Reference recipe (%)</th>
<th>Galactic’s recipe (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurised milk</td>
<td>99.92</td>
<td>99.37</td>
</tr>
<tr>
<td>Lactic ferment</td>
<td>0.05</td>
<td>0.60</td>
</tr>
<tr>
<td>ProDairy Adagio™ F</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Rennet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

### Process

- Heat milk to 36°C and mix slowly.
- Add ProDairy Adagio™ F or the ferment.
- Mix until the pH has decreased to 5.6.
- Add the rennet, mix and wait for 30 minutes.
- Cut the curd into cubes (3 to 4 cm), mix slowly for 5 minutes.
- Remove half of the whey and heat up to 42°C.
- Plunge the curd into salty (5 g/L) hot (85-90°C) water.
- Stretch and knead the mozzarella.
- Form a block and store under vacuum at 4°C.

### Impact of ProDairy Adagio™ F on the mozzarella texture

- Elasticity (Pa)
- Viscosity (Pa.s)

![Graph showing the impact of ProDairy Adagio™ F on mozzarella texture](image)

#### Starter culture • 0.6% ProDairy Adagio™ F

### Impact of ProDairy Adagio™ F on the pH during storage at 4°C

![Graph showing the impact of ProDairy Adagio™ F on pH](image)

#### Starter culture • 0.6% ProDairy Adagio™ F

### Results

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texture</td>
<td>0.60% of ProDairy Adagio™ F made it possible to produce mozzarella with a good shreddable texture without any problem of stickiness.</td>
</tr>
<tr>
<td>Organoleptic properties</td>
<td>ProDairy Adagio™ F had no organoleptic impact on the taste, smell and colour.</td>
</tr>
<tr>
<td>pH</td>
<td>The use of ProDairy Adagio™ F guarantees a stable pH during the shelf life of the product. A stable pH ensures a stable taste and texture throughout the lifetime of the product.</td>
</tr>
</tbody>
</table>

### Contact us for:

- Samples
- Technical assistance
- Trials

**Galactic Innovation Campus**

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Mail: sales@lactic.com  
Web: www.lactic.com

### References

The tests were run by a team of engineers specialised in the food sector. They were conducted in Galactic’s laboratories (Galactic Innovation Campus) located in Brussels. Our market development team remains at your disposal for further information, trials with your formulations, etc.

Since 1994 Galactic has become a natural solution provider and one of the world leaders in biotechnology serving the food, feed, personal & health care, and industrial markets. Based on its valuable experience in the fermentation of lactic acid and in the production of its derivatives, Galactic continuously develops sustainable, innovative and health-friendly solutions in the field of food safety, nutrition and green chemistry.