

Delvo<sup>®</sup>Zyme



# Protection you can trust We make it happen

## Natural solution

In hard and semi-hard cheeses with medium to long ripening times, outgrowth of bacterial spores may cause off-flavors and so-called late blowing. Using Delvo<sup>®</sup>Zyme, a formulated product based on the natural active ingredient lysozyme derived from egg white, will prevent these negative effects.

Delvo<sup>®</sup>Zyme reduces the risk of defects in cheese, allows for an optimum ripening temperature and assists further standardization of the end product, while contributing to enhancing consumer appeal of traditional quality cheese. Choosing Delvo<sup>®</sup>Zyme means choosing a natural solution from a reliable source, with consistent premium quality. All in all, Delvo<sup>®</sup>Zyme helps you to produce high quality cheese, bringing you peace of mind.



Example of a late blown cheese

## The advantages

### Prevention of late blowing and butyric rancidity

Spores of *Clostridium tyrobutyricum* are naturally present in soil and grass. Silage in particular can contain high spore counts, which can end up in cow milk. Since these spores are resistant to high temperatures, they survive the normal milk pasteurization process. When the spores germinate during cheese maturation, they form butyric acid and large quantities of gas. This gas formation results in cracks and large irregular eyes-formation, whereas the butyric acid causes an unacceptable taste and smell. Adding Delvo<sup>®</sup>Zyme to the milk will stop bacterial growth, thus preventing late blowing as well as bad taste and smell.

### Active by nature

The active ingredient of Delvo®Zyme is lysozyme, an enzyme widely present in nature. The most important natural source for lysozyme is chicken egg white. Lysozyme is highly effective against vegetative cells of *Clostridium tyrobutyricum*. Its working mechanism is based on cell growth impairment by partial or complete lysis of the cell wall membrane of the vegetative cell.

### Consistent premium quality

Sourcing ingredients from a reliable supplier brings peace of mind; leaving you to focus on your main objective: producing and selling high quality food products.

Delvo®Zyme is produced to the highest standards at state-of-the-art facilities in Western Europe. It is safe in use, approved by all relevant authorities (i.e. EU, CODEX/JECFA, FDA) and complies with purity requirements defined by the same authorities. Furthermore, our products are manufactured following GMP requirements and sanitary measures, complying with the hygiene regulations laid down by International Food Laws.

### Applications

Dosage per 1000 liter milk	
Delvo®Zyme L	100 - 200 milliliter
Delvo®Zyme G	20 - 50 grams

*Example of Delvo®Zyme G in use: Dissolve 50 grams in 1 liter water, stir thoroughly for some minutes until completely dissolved, and add the dissolved Delvo®Zyme G to 1000 liter milk.*

Delvo®Zyme is easy to use and is available both in liquid and granulate form. As Delvo®Zyme binds to the casein prior to clotting of the milk, application takes place directly into the cheese milk, before adding the rennet. Delvo®Zyme remains active in the curd throughout the ripening process and disrupts the vegetative cells once the spores start to germinate. Delvo®Zyme does not affect the performance characteristics of starter cultures or coagulants in use.

### Unlimited experience

With over half a century of experience, DSM offers unparalleled expertise in the production and application of effective preservation solutions and cheese coatings. High quality products, manufactured at state-of-the-art facilities, deliver unmatched effectiveness, bringing you peace of mind.

Our experienced sales team and in-house experts are on hand to respond to any query and work closely with you to gain optimum performance from Delvo®Zyme. This customer focused approach and proven industry understanding ensures you benefit from our expertise to help you to further optimise your products and production process.

For Protection You Can Trust™, contact us now:  
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