

# Kesozym TL 750 L

## Milk Curdling Enzyme

**Kesozym** is an enzyme obtained by fermentation of conventional micro-organisms.

**Kesozym** contains a specific protease for coagulating milk.

**Kesozym** is available as a liquid or granulated product in a thermostable or thermolabile form.

### Benefits

- Economical alternative to chymosin or animal rennet.
- Processing conditions, coagulation time etc. are similar to those for chymosin or calf rennet.
- Unlike the usual microbial chymosin, Kesozym is not obtained from genetically modified micro-organisms.
- Processing aid, and therefore exempt from declaration.

  
**SternEnzym**  
The Enzyme Designer



# Kesozym TL 750 L

## Liquid thermolabile rennet enzyme

### Description

**Kesozym TL 750 L** is a microbial milk curdling enzyme produced by controlled fermentation of non-genetically-modified *Rhizomucor miehei* (formerly *Mucor miehei*).

The specific protease in **Kesozym TL 750 L** is specially treated in order to maintain a characteristic thermal lability of the enzyme at pasteurization temperatures – in other words, to facilitate inactivation by heat. **Kesozym TL 750 L** is a brown liquid with a typical, non-irritant fermentation odour. The enzyme preparation is readily miscible with water and has a density of 1.10–1.20 g/ml. **Kesozym TL 750 L** is supplied with an activity of 750 IMCU.

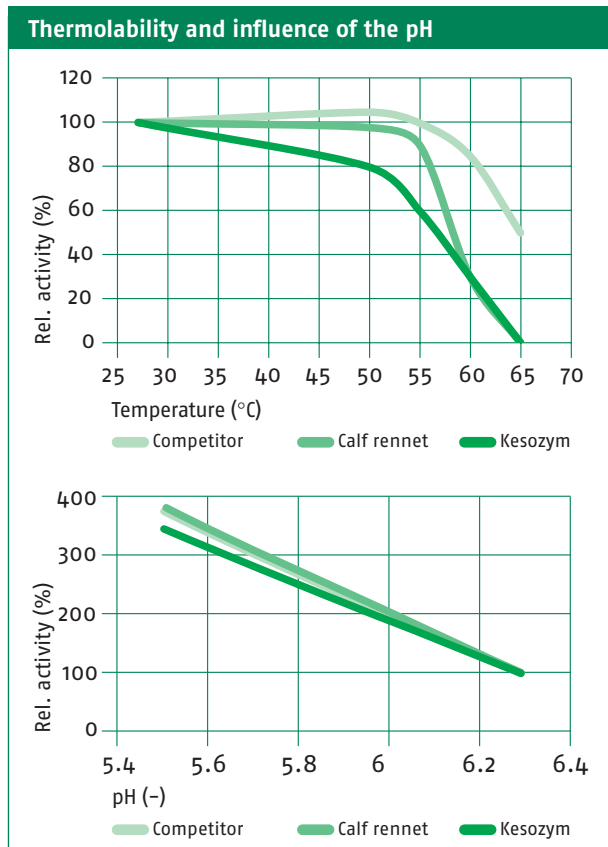
The effective temperature range of **Kesozym TL 750 L** is similar to that of calf rennet. **Kesozym TL 750 L** and calf rennet have the same activity at temperatures above 55 °C. Figure 1 shows the thermal lability of **Kesozym TL 750 L** as compared to calf rennet and other rennet enzymes. **Kesozym TL 750 L** is heat-labile and retains less than 3% of its original activity after 15 minutes at 65 °C. As this figure shows, **Kesozym TL 750 L** is inactivated during normal pasteurization. The whey thus treated no longer contains any active rennet enzyme.

Like the activity of calf rennet, the curdling activity of **Kesozym TL 750 L** depends on the pH. In the pH range of 5.5 to 7 typical of milk processing, the enzymatic activity increases as the pH decreases. The effect of the pH on the activity of different enzymes is shown in Figure 2.

### Information on applications and usage levels

As a rule, the usage level of **Kesozym TL 750 L** will depend on processing conditions, the composition of the milk and the calcium chloride concentration.

In general, 28–40 ml of **Kesozym TL 750 L** per 1,000 litres of milk are used. The optimum dosage may deviate from this recommendation, depending on processing conditions and the quality of the raw materials, and must be determined individually. **Kesozym TL 750 L** requires the availability of calcium ions in order to achieve optimum activity. For optimum performance the calcium added in the form of calcium chloride should be in the range of 10 to 100 grams per 100 litres of milk. At higher calcium chloride concentrations, **Kesozym TL 750 L** is more active than animal rennet.



### Storage

Because of the product's thermal lability, special attention should be given to the temperature at which **Kesozym TL 750 L** is stored. **Kesozym TL 750 L** should be stored in the original pack at 4 °C to 8 °C in order to minimize loss of activity.

### Packaging

**Kesozym TL 750 L** is available in a 25kg PE can or a 1,000kg IBC.