

Technical Information

Revision: 10-2013



Sumizyme MMR TL 3500 PF

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General Product information

- Sumizyme MMR TL is a microbial coagulant produced by controlled fermentation of *Rhizomucor miehei*.
- Sumizyme MMR TL is in further processing steps thermolabilised so that the residual activity after pasteurizing for 20 seconds at pH 6.0 at 68°C is less than 2% of initial activity
- according to the inactivation the residual activity at 68°C is below 1% and therefore similar to calf-rennet

Advantages:

Sumizyme MMR TL is preferably used in all fields where for economic or other market relevant reasons the use of natural rennet is impossible:

- The high grade of pureness and the reduced enzymatic side-effects guarantee a reduced quantity for the coagulation
- The high grade of pureness of the Mucorpepsin guarantees a reduced unspecific proteolysis in maturation and thus equally means less development of bitterness
- Sumizyme MMR TL is also certificated for the use in Kosher and/or Halal cheese production and suitable for Vegetarians.
- During the fermentation process lactose and GMO-free defatted soymeal is used
- Very low and controlled contain of:
 - Lipase: < 0,2 LFU / 100 IMCU
 - Alpha-Amylase: < 0,05 CU / 100 IMCU

Specification

- colour: brownish - typical
- density: 1,12g to 1,15g per ml
- Activity: 1000 ± 5% IMCU
- pH: 5,00 to 5,30
- Preservative E211 max 0,5%

Chemical analysis:

- arsenic < 3 ppm
- heavy metals as Pb < 30 ppm
- Pb < 5 ppm
- Salt 18% ± 5%
- Water 80% ± 5%
- Enzymes 2% ± 5%

Certifications:

- Halal
- Kosher
- ISO 22.000

Primary material produced by:



Takabio
49070 Beaucouze
France

Microbiological analysis:

Sumizyme MMR TL is produced according to the pureness demands of the FAO/WHO conference of experts for food additives (JECFA), according to the Food Chemical Codex (FCC) and the guidelines for alimentary enzymes of the Scientific Committee for Food (SCF).

Aerobic mesophilic plate count	<1000/ml
Salt tolerant bacteria	<100/ml
Aerobic spore formers	<100/ml
Yeasts/moulds	<10/ml
Anaerobic spore formers	<10/ml
Propionic acid bacteria	negative in 1 ml
Coliform bacteria	negative in 1 ml
Salmonella	negative in 25 ml
Listeria	negative in 25 ml
Staphylococcus Aureus	negative in 25 ml

- The above details of the bacteriological analysis are only valid for correct storage at 0-7°C and for containers with their original seals.

Application

- The dosage quantity is determined by the quantity of milk, the required process parameters and the enzyme concentration (pH, temperature, required coagulation time) and enzyme concentration. The standard dosage quantity varies between 3000 to 6000 IMCU per 100 liters of milk = 4 – 8 ml/100 liters. Sumizyme should be diluted into 10 to 20 times the amount of chlorine free cold water. The diluted coagulant must be added immediately into the milk while stirring for some minutes to distribute the coagulant properly in the milk.

Safety Information

- Sumizyme MMR TL contains approximately 18% table-salt (NaCl) and 0,5% of Sodium-Benzoate and is therefore safe to utilize.

Storage

- As with all enzymes, Sumizyme MMR TL should also be stored at a dark place at a temperature of between 0°C and +8°C. For product storage times over 6 months the enzyme activity might fall by 1-2 % per month.
- Storage over the indicated date on the label does not necessarily mean that the product is unemployable. In this case for quality management reasons a check of the needed values is indispensably recommended.

Pack sizes

- cans of 6, 12, 30 kg and 25 litres
- containers with 740 and 1200 kg
- containers with 600 and 1000 litres

Processed and repacked by:

Hundsichler GmbH – Austria
Country of Origin: Austria

Organic Certified