

PRODUCT DESCRIPTION - PD 204934-14.1EN

Material no. 53857

MARZYME® MT 2200 Powder 500 g

Rhizomucor miehei protease

Description

Marzyme® is an enzyme produced by the fermentation of a purified culture of the fungal specie Rhizomucor miehei.

Marzyme ® belongs to the group of coagulants of microbial origin.

Marzyme ® is used in cheesemaking as an alternative to animal extract coagulants.

Coagulants of microbial origin in powder form.

Directions for use

Conditions depend of the technology used and on the desired end product characteristics.

The enzyme has a double action in the cheese making process:

* Hydrolysis of the Kappa casein which gives clotting of the milk,

* Proteolytic activity during the ripening of the cheese.

In powder form, enzyme is reconstituted instantly when diluted in chlorine free cold water. Dilute it 10 times before use (example: dissolve 100g of powder in 900 ml of cold water without chlorine). The data below gives a general guideline as to the average quantities used for 100 litres of milk:

Acidified fresh cheese:	300 - 900 IMCU
Matured lactic curd:	1000 - 1800 IMCU
Semi-hard cheese:	2600 - 3300 IMCU
Stabilised semi-hard cheese, uncooked pressed cheese:	3600 - 5200 IMCU
Cooked pressed cheese:	2900 - 5200 IMCU
Cheddar and Italian semi-hard cheese:	5100 - 5900 IMCU

We do not accept any liability in case of undue application.

Composition

Sodium chloride
 Protease (origin Rhizomucor miehei)
 Sodium benzoate (E211)

Properties

Specific proteolytic activity on the Kappa casein. Coagulum formation.

Action on the ripening of the curd during the transformation into cheese. The recommended manufacturing parameters for the use of Marzyme®(initial gelling time, coagulation time, curd cutting, etc..) are very similar to those obtained when using rennet.

Physical/chemical specifications

Physical Properties:

- NaCl (density Marschall method)	>= 90 % *
- Preservative agent	Sodium benzoate (E211) *
- Sodium benzoate maximum concentration	<= 0.1 % w/w *
- Lipase (Food Chemical CODEX IV method)	< 0.2 LFU / 100 IMCU *
- Alpha-Amylase (Ceralpha method)	< 0.05 CU / 100 IMCU *

*: The compliance to this specification is monitored through periodic testing based on a defined sampling plan. This parameter is not listed on our certificate of analysis.

Biochemical specifications:

- Clotting activity (ISO 15174: 2002):	>= 2200 IMCU/g **
- Rhizomucor miehei protease concentration:	>= 28000 mg/kg

** : At the date of quality control release.

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Microbiological specifications

aerobic mesophilic total count	< 10000 / g
Coliforms	< 10 / g
anaerobic sulphite reducing spore	< 10 / g
anaerobic gas producing spore	< 10 / g
Yeasts	< 100 / g
Moulds	< 100 / g
Staphylococci coagulase positive	neg. / g
Salmonella	neg. / 25 g
Listeria monocytogenes	neg. / 25 g

Analytical methods available upon request.

Storage

Store in the original packaging in a cool, dry and dark area.

Shelf life: 24 months from production date, at a temperature between 0°C and 7°C.

During storage, the loss of enzymatic activity has been estimated to 1% maximum per month.

Packaging

This product is packaged in airtight can. The following information appears on the labelling of products: manufacturer name, product name, net volume and net weight, batch n° and shelf life.

Quantity

500 g airtight can

Purity and legal status

MARZYME® MT 2200 Powder 500 g meets the specification laid down by the EU legislation. Marzyme® complies with the recommendations of the Food Chemical Codex IV for food grade enzymes. Other local regulations should always be consulted concerning the status of this product, as legislation regarding its use in food may vary from country to country.

Safety and handling

SDS shipped with the product.

Allergens

Below table indicates the presence (as added component) of the following allergens and products thereof:

Yes	No	Allergens	Description of components
	X	wheat	
	X	other cereals containing gluten	
	X	crustaceans	
	X	eggs	
	X	fish	
	X	peanuts	
	X	soybeans	
	X	milk (including lactose)	
	X	nuts	
	X	celery	
	X	mustard	
	X	sesame seeds	
	X	sulphur dioxide and sulphites (> 10 mg/kg)	
	X	lupin	
	X	molluscs	

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Additional information

The values indicated in this document correspond to results from standardized laboratory tests. They should be considered as guidelines. In practice other values are expected depending on the type of product and technology. Due to advances in technology and continuous product improvement it may be necessary to change standard values in the future.

GMO status

MARZYME® MT 2200 Powder 500 g does neither consist of GMO, contain GMO nor is produced from GMO according to the definitions of EU Regulation 1829/2003 and 1830/2003.

Country of origin

France

Kosher status

Kosher certificate available on request.

Halal status

Halal certificate available on request.