

PRODUCT DESCRIPTION - PD 204934-4.0EN

Material no. 53857

Marzyme® 150 MG, 500 g

Powder Microbial Rennet

Description

Marzyme® is an enzyme produced by the fermentation of a purified culture of the fungal specie *Mucor miehei*. Marzyme® belongs to the group of coagulants of microbial origin. Marzyme® is used in cheesemaking as an alternative to animal extract coagulants.

Directions for use

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

Mucor miehei protease

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

Biochemical specifications:

- Clotting activity (IDF 157A/1997):	2080 - 2305 IMCU/g
- Mucor miehei protease concentration:	>= 28000 mg/kg

Microbiological specifications

aerobic mesophilic total count	< 10000 / g [12]
Coliforms	< 10 / g [13]
anaerobic sulphite reducing spore	< 10 / g [9]
anaerobic gas producing spore	< 10 / g [10]
Yeasts	< 100 / g [14]
Moulds	< 100 / g [14]
Staphylococci coagulase positive	neg. 1 g [15]
Salmonella	neg. 25 g [16]
Listeria monocytogenes	neg. 25 g [17]

[12] ISO 4833 - 2003 / IDF 100B - 1991

[13] NF ISO 4832 - 2006 / IDF 73B - 1998

[9] Spore activation Meat/Liver/Agar 10 min at 80 °C

[10] Spore activation Milk + Paraffin medium 10 min at 80 °C

[14] ISO 7954 - 1987

[15] NF EN ISO 6888-1 - 1999

[16] NF EN ISO 6579 - 2002

[17] NF EN ISO 11290-1 - 1996

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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.

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, minimum guaranteed enzyme activity expressed in mg of Mucor meihei, batch n° and shelf life.

Quantity

500 g airtight can

Purity and legal status

Marzyme® 150 MG, 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. Label food 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

MSDS available on request.

Allergens

Below table indicates the presence 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	

Local regulation has always to be consulted as allergen labelling requirements may vary from country to country.

Additional information

ISO 9001

Kosher status: OU-D certified.

Halal status: AHA certified.

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.

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GMO status

Marzyme® 150 MG, 500 g does not consist of, nor contains, nor is produced from genetically modified organisms according to the definitions of Regulation (EC) 1829/2003 and Regulation (EC) 1830/2003 of the European Parliament and of the Council of 22 September 2003.