

Lipomod[®] 281MDP

L281MDP

Features/Benefits

- Microbial alternative to pancreatic lipase
- A flavour profile dominated by free fatty acid flavours with some protein notes including sweaty, brothy, and sulphur undertones
- Fungal lipase with low protease side activity

Lipomod[®] 281MDP is a mixed fungal lipase with carefully selected low level of protease activity. It is a microbial alternative to porcine pancreatic lipase. Since it is a non-animal product Lipomod[®] 281MDP is suitable for vegetarian products. It has been specifically designed to match the flavour profile of pancreatic lipase, characterised by intense free fatty acid flavour with some sweaty, brothy and sulphur undertone notes.

Lipases hydrolyse triglycerides to liberate free fatty acids (FFA). These enzymes are widespread throughout nature and they possess different activities and specificities towards triacylglycerol substrates (fat). The free fatty acid profile (amount and type of FFA) contributes to the difference in flavour from one cheese to another. For Enzyme Modified Cheese (EMC), lipases are used to produce specific concentrated flavours. Lipomod[®] 281MDP can be suitable for use in other flavour applications.

Specification

Activity	Esterase 3,510 - 4,290 U/g (Tributyryn substrate)
Biological Source	Mixed Microbial
Form	Off-white to brown powder
Optimum pH Range	5.5 - 8.0
Optimum Temperature Range	30 - 50°C

Application & Dose

Lipomod[®] 281MDP has optimum activity at neutral pH so no pH adjustments are required whether milk, milk fat or cheese is used as a substrate. In EMC production, the shredded cheese is mixed with water and emulsifying agents to obtain an EMC slurry of 55-85% of cheese (40-55% of dry solids). The slurry is pasteurised and cooled to 40-50°C, prior addition of enzymes. The recommended dosage for L281MDP is 0.1-0.5% w/w on cheese in the EMC slurry. The mixture can then be incubated for 8-48h, depending on the enzyme dose, incubation temperature and substrate. Trials will be required to determine the exact conditions in order to achieve the desired strength of flavour. The enzyme is deactivated above 80°C at the end of incubation.

Health & Safety

Always read the Material Safety Datasheet (MSDS) before use and retain. If you are in any doubt about recommended product handling and safety, please contact Biocatalysts before use. Generally, when using enzymes avoid contact with the skin and eyes and do not breathe dusts or aerosols containing them. MSDSs are available in other languages. Please contact Customer Services.

Storage

Powders: Activity will remain within specification for at least 12 months from the date of manufacture when stored at 0 - 20°C.

Allergens

Refer to allergen statement.

Food Status

Material complies with the JECFA/FAO/WHO and FCC recommended specifications for enzymes used in food processing.

GM Status

This product has been manufactured using a fermentation process of a microbial organism that has not been altered using modern biotechnology. This product does therefore not require labelling as GMO on food labels.

Quality & Food Safety

Biocatalysts operates a Hazard Analysis at Critical Control Points (HACCP) system. This ensures that ingredients and the production environment are regularly monitored for contamination and that the processes are designed to produce safe products every time.

The Company's integrated management system encompasses Quality, Food Safety, Health and Safety and GMP.

Biocatalysts Ltd is certified to ISO9001, ISO14001, ISO45001 and FSSC 22000.

Certificates are available on request from the Customer Services Department.

Availability

Powders: standard 25kg net poly-lined, 100% recyclable cardboard box. Non-standard quantities are also available for some products, please enquire.