

## Lipomod™ 691P

- Fungal Lipase
- EMC Production
- Vegetarian and Kosher products

Lipases hydrolyse triglycerides to liberate fatty acids. These fatty acids have strong flavour characteristics and are responsible for the flavours associated with cheese products. These enzymes are widespread throughout nature and have different degrees of activity to varying substrate triglycerides. For Enzyme Modified Cheese (EMC) they can be used to produce concentrated specific flavours.

Lipomod™ 691P is a mixed fungal lipase. Commonly, EMC is produced using lipases of animal origins, hence this fungal product is well suited to markets where animal-free alternatives are desired. Products made using this lipase may be sold to vegetarian and kosher markets. Lipomod™ 691P preferentially hydrolyses medium and long chain fatty acids.



### SPECIFICATION

Activity	Esterase 12900 U/g
Biological Source	<i>Candida sp. / Rhizopus sp.</i>
Form	Off-white to light brown powder
Working pH	6-7
Temperature range	40-50°C

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## APPLICATION & DOSAGE

Lipomod™ 691P has optimum activity around neutral to slightly acidic pH, so no pH adjustments are required whether milk, milk fat or actual cheese is used. In production of EMC the shredded cheese is mixed with emulsifying agents to obtain a slurry of 40-55% dry solids. This is pasteurised and cooled to 40-50°C. Lipomod™ 691P should then be added at 0.05 to 0.15% w/w on solids and the mix incubated. The incubation time can vary from 8-36 hours and will depend on the enzyme dose, temperature and substrate. Trials will be required to determine the exact conditions. The enzyme is deactivated above 80°C. If protein notes are required Promod™ 215P can be used with Lipomod™ 691P.

### HEALTH AND SAFETY

Always read the Health and Safety sheet (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.

### STORAGE

Stability has not yet been confirmed but it is expected that activity will remain upon storage under 20°C for up to 12 months. Stability trials are underway for confirmation.

### ALLERGENS

May contain trace amounts soy products as a carry-over from fermentation substrates used in production. Lactose is used as a diluent.

### FOOD STATUS

Prepared from enzymes of GRAS status and manufactured to FCC/JECFA /WHO/FAO recommendations for enzymes used in food processing.

### GM STATUS

The production micro-organism used in this product is not a GMO. Within the proposed guidelines of the European Union regarding Genetically Modified products, the above product would be classed as GMO free.

### QUALITY

#### 1. Food Safety Policy

The company 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.

#### 2. Good Manufacturing Practice (GMP)

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

#### 3. ISO9001

Biocatalysts Ltd is certified to BS ISO9001: 2000. Regular Audits are carried out by the British Standards Institute (BSI) to ensure continuing compliance with the standard.

### AVAILABILITY

Powders: standard 25kg nett poly-lined fibre kegs.

Non-standard quantities of 1kg and 5kg are also available for some products, please enquire.

