

RmL CLEA

- **Rhizomucor miehei lipase**
- **1,3 specific**
- **Immobilized as Cross-Linked Enzyme Aggregate**



Rhizomucor miehei lipase is a commercially available lipase produced by over expression and fermentation. Lipases catalyze the hydrolysis of triglycerides. Lipase from *Rhizomucor miehei* is specific for short chain fatty acids and shows 1,3 preference. The proprietary CLEA methodology has been applied to immobilize this enzyme.

CLEA Methodology

Our proprietary methodology to immobilize enzymes as Cross-Linked Enzyme Aggregates (CLEAs) consists of covalent cross linking of precipitated enzymes. This efficient and economically attractive method yields immobilized biocatalysts that do not include support material and therefore have a very high activity per unit volume.

Product Properties

Product Type:	Immobilized form of lipase from <i>Rhizomucor miehei</i> as a Cross-Linked Enzyme Aggregate (CLEA)
Formulation:	Powder
Enzyme Type:	Lipase, Triacylglycerol hydrolase, EC 3.1.1.3
Natural Reaction:	Hydrolysis of fats and oils
Substrate Specificity:	1,3-specific, short chain fatty acids are preferred
Typical activity:	100.000 units/g*

* 1 unit will catalyse the formation of 1µmol butyric acid from tributyrin at 40°C and pH 7.5

CLEA® is a registered trademark of CLEA Technologies BV.

Specific Product Specification

RmL CLEA

Applications

Lipases in general are used in a wide variety of applications in the fine chemistry, laundry and food industry. In organic synthesis they are used in the production of enantiopure alcohols, amines or acids via ester hydrolysis in aqueous media or via direct esterification in organic media.

Storage and Stability

The RmL CLEA® is best stored in a cool and dry environment. Storage at 4 °C is recommended.

Formulations

RmL CLEA is available as a powder.

Pricing and Availability

RmL CLEA is available with the typical activity described in the product properties. The available quantities range from 10 kU to giga unit scale. Please inquire for availability, lead times and prices.

References

1. Sheldon, Roger A; Sorgedragger, Menno; Janssen, Michiel H. A. **Use of Cross-linked Enzyme aggregates (CLEAs) for performing biotransformations.** *Chimica oggi, Chemistry Today* 2007, 25(1), 48-52.
2. Sheldon, R. A; Schoevaart, R; Van Langen, L.M. **Cross-linked enzyme aggregates (CLEAs): A novel and versatile method for enzyme immobilization (a review).** *Biocatalysis and Biotransformation* 2005, 23(3/4), 141-147.
3. Sheldon, Roger A; Schoevaart, R; van Langen, Luuk M. **CLEAs: An effective technique for enzyme immobilization.** *Specialty Chem.* 2003, July/August, 40-42.
4. Cao, Linqiu; van Langen, Luuk; Sheldon, Roger A. **Immobilised enzymes: carrier-bound or carrier-free?** *Curr. Opin. Biotechnol.* 2003, 14, 387-394.