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Enantioselective hydrolysis of ibuprofen ethyl ester by a thermophilic immobilized lipase, ELT, from *Rhodothermus marinus*

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Highlights

- A novel enantioselective lipase from *Rhodothermus marinus* has been cloned and overexpressed.
- The purified lipase (ELT) was immobilized on chitosan-MMPs and SiO_2 nanoparticles.
- The ELT-SiO_2 showed remarkable kinetic parameters.
- Immobilized enzymes were used as biocatalyst to obtain *S*-enantiopure of ibuprofen.
- Enantioselective ratio and conversion percent of the immobilized ELT were 3.0 and 43%.