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Synthesis of ethyl acetate from purified lipase of *Aspergillus fumigatus*

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Lipases are ubiquitous biological macromolecules which have many industrial and environmental applications. Lipase was purified from Aspergillus fumigatus by using Octyl Sepharose column chromatography. The enzyme was purified by ammonium sulphate precipitation and hydrophobic interaction chromatography which resulted in 7-fold purification. The molecular weight of protein using Native-PAGE was found to be 70 kDa. The apparent molecular weight by SDS-PAGE was found to be 35 kDa which indicated that the enzyme was homodimer. The optimum temperature and pH for activity of the enzyme was found to be 40°C and 9.0 respectively. The kinetic parameters V_{max} and K_m of the purified lipase were 10.42 µmol min−1 mg−1and 9.89 mM respectively. Ethyl acetate was synthesized using purified lipase from ethanol and acetic acid and was analyzed by GC/MS. The sample fragment ion at 41 and 63 m/z indicated the presence of ethyl acetate in the sample.

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