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Expresstion and purification of His-tagged lipases from *Acinetobacter shindlerii* DYL 129.

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The His-tagged lipases, LipA1, LipA2, LipA3 from *Acinetobacter shindlerii* DYL 129 was over expressed in *Escherichia coli* and purified by ion-exchange chromatography using an ACTA prime. Although the LipA1-His and LipA2-His were produced inclusion bodies, they could be expressed at high levels and further they were solubilized by 8M urea buffer and purified. The LipA3-His was over expressed soluble protein and then purified. The expressed LipA3-His showed activity on 1% tributyrin agar plate. After purification, the molecular mass was determined employing SDS/PAGE. The purified lipases are active against a wide range of fatty acid esters of *p*-nitrophenyl, especially, they seems prefer to attacked the C_4 and C_{14}.

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Expression, purification and characterization of a lipolytic enzyme from *Acinetobacter* sp. BD5

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The lipolytic enzyme gene of *Acinetobacter* sp. BD5 was cloned using PCR technique. The sequence analysis revealed a 975bp ORF of lipase A and a 1032bp ORF of lipase foldase which encoded deduced amino acid proteins of 325 (35kDa) and 344 (37kDa), respectively. The gene encoding lipase A was subcloned in pET-32a expression vector as under the control of T7 promoter. Hige level expression of lipase A was observed induction with 0.03mM IPTG at 37℃. Lipase A was over expressed as inclusion bodies in *Escherichia coli* BL21 cells. The inclusion bodies of lipase A was solublized by using denaturation buffer and the denatured enzyme was purified by affinity chromatography. The molecular mass of the purified enzyme was estimated by SDS-PAGE to be 37kDa. The substrate, temperature and pH optimum of the purified lipase A were determined by using various *p*-NP substrate, temperature and pH, respectively.