Indian Journal of Ecology (2017) 44 (1): 19-23

Manuscript Number: 2465
NAAS Rating: 4.96

Isolation and Screening of Lipase Producing Microorganisms from Natural Sources

M.G. Singh[1], Chandraveer[2] and Abhishek M. Tripathi[3]

[1]*Division of Agriculture Education, ICAR, New Delhi-110112, India*
[2]*Department of Dairy and Food Microbiology, CDFST*
Maharana Pratap University of Agriculture and Technology, Udaipur-313 001, India
[3]*Global Change Research Institute AS CR, v.v.i., Brno-603 00, Czech Republic*
E-mail: mkb_jaipur@yahoo.com

Abstract: Lipases are the enzymes that bring about a wide range of bioconversion reactions. Lipases occur widely in nature, but microbial lipases are commercially most significant. Lipase catalyzedtrans-esterification, hydrolysis and esterification are the important class of reactions for technological applications in fats and oil industry, dairy industry, pharmaceuticals and bakery industry. The main reason for the steadily growing interest in lipases is also because of their enantio-selective, regioselective and chemo-selective nature. Enzyme-mediated reactions are attractive alternatives to tedious and expensive chemical methods. Present investigation aimed at bio-prospection of lipase producing microbial isolates from various natural sources. The better enzyme producing microbial isolate for its ability to produce the enzyme was investigated under diverged nutrient conditions of lipase assay. A total of twenty two microbial isolates were isolated from different sources, out of which nine fungal isolates and thirteen bacterial isolates were found to show appreciable lipase producing ability. These cultures were further used to find out their quantitative production of lipase in liquid media with time. It was observed that in majority of the cases, the lipase production increased with time, reaching the maximum on fifthday and decreasing thereafter.

***Keywords*:** Lipase assay, Natural sources, Screening, Submerged fermentation