**Abstract**

Fungi isolated from soil where screened for exogenous lipolytic activity. The highest lipase activity was found in an isolate of *Aspergillus terreus*. Optimal cultural conditions influencing the growth and production of extra cellular lipase from this fungus was investigated. The lipase yield was maximum on day 5 of incubation, when the medium was supplemented with maltose and cotton seed oil as carbon source and potassium nitrate as nitrogen source, at pH 4 and at a temperature of 400 C. The possibility of using the lipase thus produced for transesterification of cotton seed oil to biodiesel was investigated.