

## SUMMARY

The main objective of the present study focuses at isolation and screening of highly productive lipase producing bacteria from soil samples of various dairy farms. Samples of soil were collected from various dairy farms of Lahore and processed by serial dilution method to detect the lipase activity using tween agar. A Total of 66 lipase producing bacteria were isolated and further screened qualitatively and quantitatively. Five bacterial strains named as L1C, L1D, L7J, L8C and L12C were found best producers for lipase whose optimum conditions for growth and for production of lipase determined. Maximum lipase production from 26 to 44 U/ml was gained using media containing olive oil as a substrate and peptone as a nitrogen source, pH 6-8, inoculum size 4% to 6%, temperature 30°C and 37°C, inoculum age 12 to 24 h and incubation period of 48 h. Conditions for enzyme kinetics of lipase were pH 7.6, incubation temperature 30°C with 10% substrate concentration. The 16S rRNA ribotyping was performed and L1C and L7J identified as *Acinetobacter junii* while L1D, L8C and L12C as *Stenotrophomonas maltophilia*. The specific activity of lipase was ranged from 4.73 to 5.87 U/mg of these isolated strains.