

Industrial Biotechnology Training
Molecular Biology (Specialized)
Session 2021-2022

Module Content
Preparation of Molecular grade solutions
Demonstration of isolation of genomic DNA from prokaryotes
Demonstration of isolation of genomic DNA from Eukaryotes (animal and plant cells)
Isolation of plasmid DNA from prokaryotes
Agarose gel electrophoresis and quantification of DNA sample
Calculation of DNA melting temperature and estimation of composition of nucleotide sample
PCR amplification – gene specific
PCR amplification – using RAPD Primers
Multiplex PCR
Colony PCR
PCR Purification
Competent cell preparation and transformation
Ligation
RFLP
SNP detection
SDS-Page