

ADVANCED RECOMBINANT DNA AND PCR TECHNOLOGY

(Course Duration: 45 DAYS)

Coursework

An introduction to Recombinant DNA Technology

Isolation of DNA from fruit

Isolation and purification of chromosomal DNA from yeast / plant / animal

Instrumentation in Recombinant DNA Technology

Isolation and purification of total DNA from prokaryote

Isolation of Plasmid DNA from prokaryotes

Quantification of DNA

Gel Electrophoresis Techniques (AGE & SDS-PAGE) and applicability in Industries

Agarose Gel Electrophoresis

U.V. Transillumination and applicability in Biotech industries

Blotting techniques in Biotechnology

Southern Blotting and its application spectrum

PCR Basics

Primer screening

Amplification of gene of interest

Preparation of Competent cells

Transformation of Recombinant DNA into host cells

Screening of Competent cells

Sequencing of DNA*(optional)

Sequence Analysis with Bioinformatics

Major Research Project