

MIC 203-P MOLECULAR BIOLOGY [P]

Practical Course Credit : 1

Contact Hours : 30

1. Isolation of genomic DNA of bacterial cells, estimation of quantity and purity of DNA by spectrophotometry, and agarose gel electrophoresis.
2. Recovery of genomic DNA from agarose gel.
3. PCR amplification of a specific gene using genomic DNA as a template and agarose gel analysis of PCR product to determine amplicon size.
4. Demonstration of RT-PCR.

Reference Books (Composite list for theory and practicals)

1. Alberts, B., Johnson, A., Lewis, J., Morgan, D., Raff, M., Roberts, K. and Walter, P., Molecular Biology of the Cell, Garland Science.
2. Darnell, J. E., Lodish, H. F. and Baltimore, D., Molecular Cell Biology, Scientific American Books, Spektrum Akademischer Verlag.
3. Watson, J. D., Molecular Biology of the Gene, Pearson/Benjamin Cummings.
4. Malacinski, G.M., Freifelder's Essentials of Molecular Biology, Narosa Book Distributors Private Limited.
5. Krebs J. E., Lewin, B., Goldstein, E. S. and Kilpatrick S.T., LEWIS Genes XI., Jones and Bartlett Publishers.
6. Gardner, E. J., Simmons, M. J. and Snustad, D. P. Principles of Genetics, John Wiley & Sons.
7. Tamarin, R. H., Principles of Genetics, McGraw-Hill Higher Education.
8. Twyman, R. M. and Wisden, W., Advanced Molecular Biology: A Concise Reference, BIOS Scientific Publishers.
9. Green, M. R. and Sambrook, J., Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory, New York.
10. Davis, L. G., Dibner, M. D. and Battey, J. F., Basic Methods in Molecular Biology, Elsevier.
11. Gerhardt, P., Methods for General and Molecular Bacteriology, Elsevier.