

MMO 105-P MARINE EXTREMOPHILIC MICROORGANISMS [P]

Practical Course Credit : 1

Contact Hours : 30

1. Technique for isolation of psychrophiles/ halophiles/ oligotrophs and anaerobes.
2. Tolerance of isolates to cold temperatures.
3. Detection of osmolytes in halophiles.
4. Growth of oligotrophs at varying nutrient levels.

Reference Books (Composite list for theory and practicals)

1. Brock, T. D., Thermophilic Microorganisms and Life at High Temperatures Springer, New York.
2. Horikoshi, K. and Grant, W. D., Extremophiles – Microbial Life in Extreme Environments, Wiley, New York.
3. Rainey, F. A., Oren, A. (2006) Extremophile microorganisms and the methods to handle them. Methods in Microbiology, 35:1-25.
4. Satyanarayana, T., Raghukumar, C., Shivaji, S. (2005) Extremophilic microbes: diversity and perspectives. Current Science, 89(1): 78-90.
5. Ventosa, A., Nieto, J. J., Oren, A. (1998) Biology of moderately halophilic aerobic bacteria. Microbiology and Molecular Biology Reviews, 62: 504-544