



Microbiology Laboratory Techniques

This module describes some fundamental techniques and procedures that are used regularly in microbiology laboratories.

Objectives:

- Know how to work effectively in a cleanroom cabinet
- Describe how media is prepared and quality controlled
- Know how to read exposure plates and report results
- State the requirements for microbiology method validations
- Handle and maintain cultures according to laboratory procedures
- State the special requirements and limitations of the sterility test

Course Outline

LAMINAR FLOW AND BIOHAZARD CABINETS

- o Introduction
- o Airflow patterns I
- o Airflow patterns II
- o Transferring materials
- o Review

MEDIA PREPARATION AND QC

- o Introduction
- o Importance of media
- o Media preparation notes
- o QC tests
- o Storage conditions
- o Importance of traceability
- o Review

READING EXPOSURE PLATES

- o Introduction
- o Environmental monitoring
- o Microbiological plating
- o Membrane filtration
- o Direct plate techniques
- o Exposure plate reliability
- o Reading and recording
- o Review

METHOD VALIDATION FOR MICROBIOLOGY

- o Introduction
- o Test methods
- o Typical validation tests
- o Examples

HANDLING AND MAINTAINING CULTURES

- o Introduction
- o Why maintain cultures?
- o Sources of cultures
- o Cultures as references
- o Precautions
- o Subculturing requirements
- o Review

THE STERILITY TEST

- o Introduction
- o Purpose & principles
- o Unsatisfactory test results
- o Satisfactory test results
- o Sterility test environment
- o Negative
- o Review

CONCLUSION

- o Summary