

# GMP

3

## Microbiology in the Workplace

This module provides an introduction to types and growth of microbiological organisms as well as methods of controlling microbial contamination.

Objectives:

- Describe what types of micro-organisms may be found in pharmaceutical products, water, and the environment
- Identify the major sources of microbial contamination and what is considered to be “objectionable”
- Identify microbial contamination problems in the workplace
- Identify procedures to reduce the chance of microbial contamination

# Course Outline

## INTRODUCTION

- o Welcome
- o What do you think?
- o GMP solution
- o Objectives
- o Reviews and assessments

## BACTERIA AND FUNGI

- o What do you think?
- o GMP solution
- o Overview
- o Roles of bacteria and fungi
- o Basic classification of bacteria

## GROWTH OF MICROBES

- o What do you think?
- o GMP solution
- o Overview
- o Physical environment
- o How bacteria grow
- o How fast can bacteria multiply?
- o How bacteria die
- o Review

## MICRO-ORGANISM CONTROL

- o What do you think?
- o GMP solution
- o Objectionable organisms
- o Minimising microbes
- o Microbial control issues
- o Starting materials control
- o Control of equipment
- o Control of water
- o What do you think?
- o GMP solution
- o Control of environment
- o Personal hygiene
- o Some GMP citations
- o Review

## CONCLUSION

- o Summary