

MICROBIOLOGICAL WATER ANALYSIS PROCEDURES

“Ensuring Safe and Compliant Water Systems Through Accurate Microbiological Testing”

Schedule

Date	Venue	Fees (Online)
24 - 25 Aug 2026	Online	USD 700 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Microbiological water analysis is critical for maintaining public health, ensuring regulatory compliance, and supporting safe operational practices in industrial and municipal systems. Accurate testing identifies harmful microorganisms, prevents contamination, and ensures water safety.

This intensive 2-day online training equips participants with practical skills in microbiological water testing and analysis. The program covers sampling techniques, microbial detection methods, laboratory safety practices, and reporting procedures, enabling participants to maintain safe and compliant water systems.

Objectives

By the end of this course, participants will be able to:

- Understand principles of microbiological water analysis
- Apply proper sampling and laboratory techniques
- Identify common microbial contaminants in water systems
- Conduct tests using standard microbiological methods
- Interpret and report results accurately
- Implement corrective and preventive measures for water safety

Why Attend

- Ensure water safety and regulatory compliance
- Minimize risks of microbial contamination
- Improve accuracy and reliability of laboratory testing
- Enhance operational and environmental safety
- Gain practical tools for microbiological water analysis
- Strengthen professional competence in water quality management

Target Audience

This program is designed for:

- Laboratory technicians and analysts
- HSE and water quality professionals
- Environmental engineers and officers
- Operations and maintenance staff managing water systems
- Facility managers and compliance officers
- Professionals responsible for water safety and monitoring

Individual Benefits

Key competencies that will be developed include:

- Conducting microbiological water analysis using standard procedures
- Sampling and handling techniques for accurate results
- Identification of microbial contaminants
- Troubleshooting laboratory and testing issues
- Reporting results clearly and accurately
- Applying preventive measures for safe water systems

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved water safety and compliance with regulations
- Enhanced operational reliability and quality assurance
- Reduced risk of microbial contamination in water systems
- Strengthened laboratory testing and monitoring capabilities
- Better documentation and reporting of microbiological results
- Promotion of a proactive water safety culture

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Overview of microbiological testing principles and regulations
- Case Studies – Real-world examples of water contamination and corrective actions
- Workshops – Practical exercises in sampling, testing, and analysis
- Peer Exchange – Group discussions on challenges and best practices
- Tools – Sampling guides, analysis templates, and reporting formats

Course Outline

Detailed 2-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules Coffee Breaks: 09:30 & 11:15 Lunch Break: 01:00 – 02:00

Day 1: Fundamentals of Microbiological Water Analysis

Module 1: Introduction to Microbiological Testing (07:30 – 09:30)

- Importance of water safety and microbiological monitoring
- Regulatory requirements and standards

Module 2: Sampling Techniques and Laboratory Safety (09:45 – 11:15)

- Proper collection and handling of water samples
- Laboratory safety procedures

Module 3: Microbial Detection Methods (11:30 – 01:00)

- Common microorganisms in water
- Culture-based and rapid testing techniques

Module 4: Workshop – Sample Analysis (02:00 – 03:30)

- Practical exercises in microbial detection

Day 2: Analysis, Interpretation, and Corrective Actions

Module 1: Advanced Microbiological Testing Methods (07:30 – 09:30)

- Quantitative and qualitative analysis
- Use of instruments and reagents

Module 2: Data Interpretation and Reporting (09:45 – 11:15)

- Analyzing results and drawing conclusions
- Preparing accurate and compliant reports

Module 3: Corrective and Preventive Measures (11:30 – 01:00)

- Addressing contamination issues
- Implementing control strategies

Module 4: Workshop & Case Study Review (02:00 – 03:30)

- Real-world water contamination scenarios
- Action planning for improved water safety

Certification

Participants will receive a Certificate of Completion in Microbiological Water Analysis Procedures, validating their practical skills in sampling, testing, and monitoring water systems for microbial safety

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