BLACKBIRD FOR TRAINING

Heterotrophic Plate Count – Standard Method for the Examination of Water and Wastewater (9215 A & B)

26 April – 7 May 2027
Amsterdam (Netherlands)



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Ref: 3254913_181843 **Date:** 26 April – 7 May 2027 **Location:** Amsterdam (Netherlands) **Fees:** 9400 GBP

Introduction

In today's evolving water and wastewater management sector, the ability to perform accurate microbiological assessments is critical for ensuring public health and environmental safety. The Heterotrophic Plate Count HPC is a key microbiological test used worldwide to evaluate the general microbial population in potable water, treated effluents, and other water samples. Standard Method 9215 A & B outlines the essential procedures and quality control measures to achieve reliable results in these contexts.

This comprehensive training course provides in-depth knowledge and hands-on experience in applying the HPC using Standard Method 9215 A & B. Participants will learn the principles, techniques, and best practices that are vital for water quality assessments and compliance with international standards such as WHO, EPA, and local regulatory bodies.

Course Objectives

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

- Understand the importance and applications of heterotrophic bacteria testing in water systems.
- Apply Standard Methods 9215 A Overview and 9215 B Pour/Spread Plate Methods.
- Correctly collect, preserve, and handle water samples for HPC.
- Use proper media, incubation, and enumeration techniques for accurate HPC procedures.
- Interpret HPC results and integrate them into comprehensive water quality assessments.

Course Outlines

Day 1: Microbial Water Quality and HPC Overview

- Introduction to microbial indicators in water quality.
- Role of heterotrophic bacteria in water systems.
- Overview of HPC and its limitations.
- Regulatory relevance of HPC WHO, EPA, local.
- Comparison of different HPC methods.



Day 2: Understanding Standard Method 9215 A & B

- Scope and background of Standard Method 9215.
- Definitions and microbiological terms.
- Overview of parts A-E of the method.
- Focus on Part A Introduction and Part B Plate Count Methods.
- Overview of pour plate vs spread plate techniques.

Day 3: Laboratory Setup and Media Preparation

- Required materials, glassware, and equipment.
- Types of media used R2A, PCA, etc..
- Media preparation and sterilization techniques.
- Pour plate media vs spread plate media handling.
- Storage and shelf-life of prepared media.

Day 4: Sample Collection and Preservation

- Selection of sampling points and volumes.
- Aseptic techniques and sample container types.
- Use of sodium thiosulfate in chlorinated samples.
- Sample preservation and holding times.
- Sample transport and chain of custody.

Day 5: Pour Plate and Spread Plate Techniques

- Pour plate procedure - step-by-step.
- Spread plate procedure - step-by-step.
- Serial dilution techniques.
- Avoiding contamination and false counts.
- Differences in colony recovery between methods.

Day 6: Incubation and Enumeration

- Incubation conditions temperature, time, aerobic.
- Reading and recording colony counts.
- Differentiating colony morphologies.
- Identifying overgrowth and TNTC plates.
- Counting accuracy and acceptable plate ranges.



Day 7: Data Interpretation and Result Reporting

- Calculating CFU/mL from dilution factors.
- Recording results in lab logs or databases.
- Interpreting normal vs elevated counts.
- Linking results to water quality status.
- Reporting formats and compliance with standards.

Day 8: Quality Control and Validation

- Positive and negative controls.
- Media sterility and performance checks.
- Duplicate and blank sample handling.
- Method reproducibility and recovery validation.
- Troubleshooting QC failures.

Day 9: Safety, Waste Disposal, and Audit Preparedness

- Biosafety practices in microbiology labs.
- Handling biohazard waste and plate disposal.
- Cleaning and decontaminating lab surfaces.
- Documentation for audits and inspections.
- Good Laboratory Practice GLP compliance.

Day 10: Practical Demonstration and Course Wrap-Up

- Full hands-on session using 9215 B pour and spread plate.
- Result comparison and discussion.
- Review of key learning points from Days 1-9.
- Participant assessments and feedback.
- Certification and closing session.

Why Attend This Course: Wins & Losses!

- Gain practical, actionable skills in applying Standard Method 9215 A & B for reliable water quality assessments.
- Strengthen your ability to detect and monitor heterotrophic bacteria in potable water and treated effluents.
- Build confidence in collecting, preserving, and analyzing water samples using pour and spread plate techniques.
- Improve accuracy and compliance in your microbiological testing, reducing regulatory risks.
- Learn from experienced professionals and real-world examples to reinforce your understanding.
- Enhance your laboratory safety practices and ensure audit readiness.
- Foster continuous improvement through quality control and validation practices.
- Network with peers and expand your knowledge in water microbiology.



Conclusion

Accurate microbial testing is foundational for ensuring the safety and quality of water in today's dynamic water and wastewater management landscape. This course provides a structured and comprehensive approach to performing the Heterotrophic Plate Count using Standard Method 9215 A & B, equipping you with the essential skills, knowledge, and confidence to ensure reliable and compliant water quality assessments.

Start applying these proven methods today and become a leader in water microbiology testing—promoting public health, environmental protection, and regulatory compliance in your organization. Let's build a future where safe water and environmental stewardship are achievable goals.

