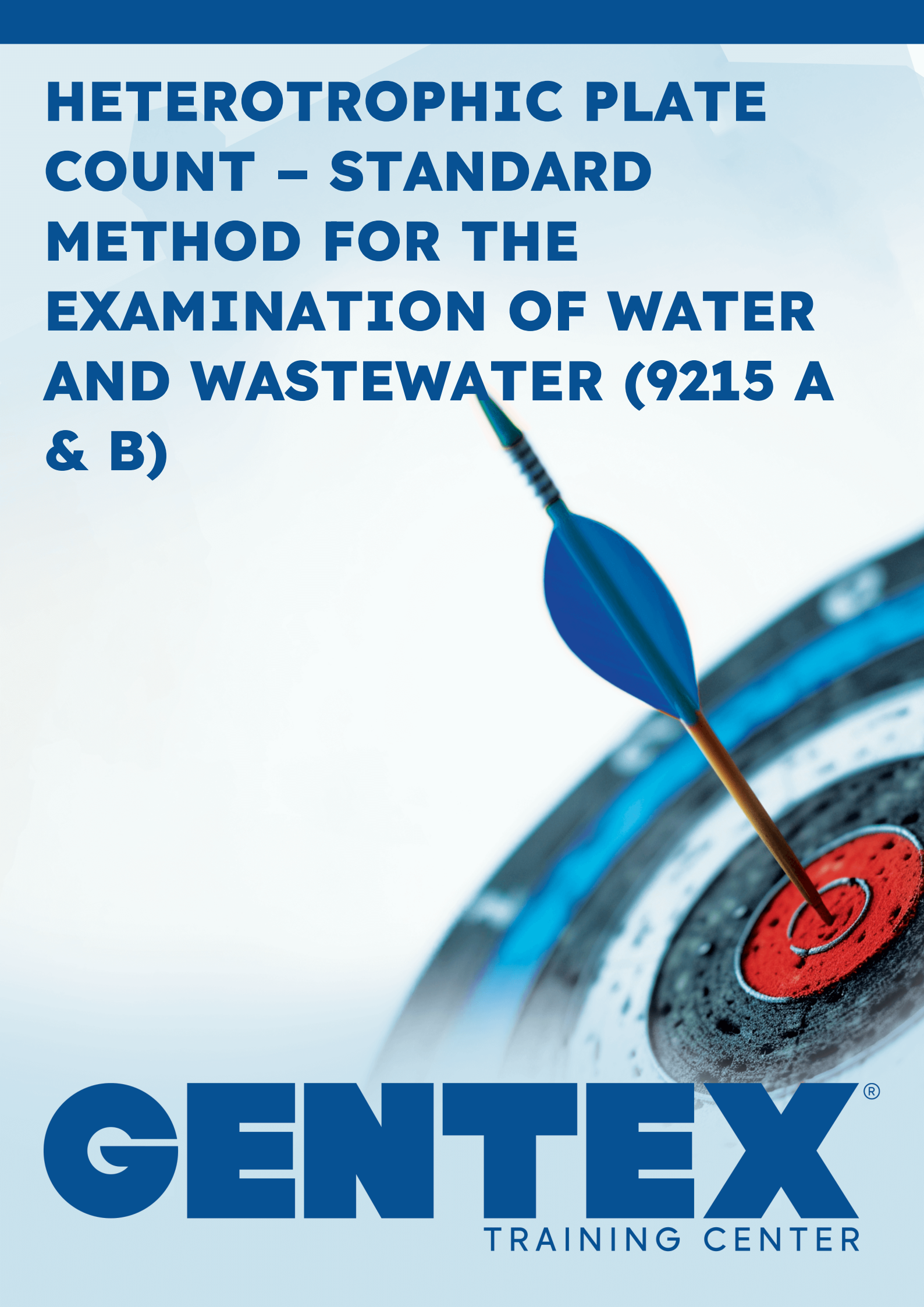
HETEROTROPHIC PLATE COUNT – STANDARD METHOD FOR THE EXAMINATION OF WATER AND WASTEWATER (9215 A & B)



GENTEX®
TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Introduction

Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B) Training Course prepares laboratory and water quality professionals to perform and interpret the heterotrophic plate count correctly. Participants work through the scope and significance of the method, sampling and holding times, pour plate, spread plate, and membrane filtration procedures, incubation and colony counting, quality control and assurance, and reporting and interpretation as one connected laboratory discipline. The programme links the microbiological condition of a water sample with the procedural controls that make the result credible. As a result, learners gain a practical, standards-based method. Furthermore, the course strengthens aseptic technique, quality control discipline, and reporting accuracy.

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

- Explain the scope, purpose, and significance of the HPC method.
- Apply 9215 A and 9215 B requirements accurately.
- Apply aseptic technique and laboratory safety practice.
- Collect, preserve, and handle samples within holding times.
- Perform pour plate, spread plate, and membrane filtration procedures.
- Apply incubation conditions of time and temperature correctly.
- Count colonies accurately and calculate results as CFU/mL.
- Apply dilution, serial dilution, and countable range rules.
- Apply quality control: blanks, duplicates, and positive controls.
- Apply method validation, documentation, and result reporting.

GENTEX® TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Course Methodology

- Interactive sessions built on HPC laboratory procedure and quality cases.
- Workshops on sampling, dilution, plating, and counting rules.
- Group exercises on colony counting, calculation, and result interpretation.
- Hands-on practice with bench sheets, dilution schemes, and QC records.
- Simulation of a plate reading and a quality control review.
- Facilitator coaching and peer review on personal laboratory protocols.

Who Should Take This Course

- Water and wastewater laboratory technicians and analysts.
- Microbiology laboratory supervisors and quality officers.
- Drinking water and environmental monitoring staff.
- Industrial water treatment and cooling system operators.
- Regulatory inspectors and laboratory accreditation assessors.
- Consultants advising on water microbiology testing and accreditation.

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

Day 1: Method Scope, Significance, and Fundamentals

- Purpose and scope of the heterotrophic plate count.
- Where HPC fits in water and wastewater examination.

GENTEX® TRAINING CENTER

- Difference between HPC, total coliform, and specific pathogen tests.
- Interpreting HPC results: what they do and do not mean.
- Regulatory and guideline uses of HPC data.
- Laboratory safety, biosafety levels, and waste handling.
- Case discussion: a result rejected on procedural grounds.

Day 2: Sampling, Preservation, and Handling

- Sampling points, plans, and representative sampling.
- Sterile container selection and field technique.
- Dechlorination and neutralisation of residual chlorine.
- Holding times, temperature, and transport conditions.
- Sample identification, chain of custody, and logging.
- Sample receipt checks and rejection criteria.
- Workshop: preparing a sampling and handling protocol.

Day 3: Pour Plate and Spread Plate Procedures (9215 B)

- Media preparation and sterilisation for HPC.
- Pour plate procedure and agar temperature control.
- Spread plate procedure for liquid samples.
- Serial dilution technique and dilution blanks.
- Inoculation volumes and expected countable range.
- Incubation time and temperature conditions.
- Exercise: designing pour plate and spread plate runs.

Day 4: Membrane Filtration and Colony Counting (9215 A)

- Membrane filtration apparatus and aseptic setup.
- Filtration volumes and filter handling.
- Placing, incubating, and reading membrane filters.
- Colony counting rules and counting aids.
- Calculating CFU/mL from dilution factors.
- Recording counts, dilutions, and calculations on bench sheets.
- Simulation: reading plates and calculating results.

Day 5: Quality Control, Validation, and Reporting

- Quality control samples: blanks, duplicates, and spiked controls.
- Media sterility and performance checks.
- Precision and accuracy assessment for HPC.
- Method validation, verification, and uncertainty.
- Documentation, bench sheets, and traceability.
- Reporting results, units, and interpretation.
- Capstone: presenting an HPC method and quality assurance plan.

Conclusion

By successfully completing Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B), participants will gain a practical command of the HPC method's scope and significance, sampling and handling, pour plate and spread plate procedures, membrane filtration, colony counting and calculation, quality control, and result reporting. They will acquire skills in aseptic technique, dilution and plating, colony counting, and quality assurance that produce credible, defensible laboratory results. Gentex Training Center designs the programme to help professionals perform the heterotrophic plate count with confidence.

FAQs

Q1 What is the "Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B)" course about?

It prepares laboratory and water quality professionals to perform and interpret the heterotrophic plate count correctly. The course spans method scope and significance, sampling, preservation and handling, pour plate and spread plate procedures, membrane filtration and colony counting, and quality control, validation and reporting.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q2 What are the key benefits of the "Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B)" course?

You gain a practical, standards-based method that links the microbiological condition of a water sample with the procedural controls that make the result credible. The course improves sampling and handling discipline, strengthens plating and dilution technique, sharpens colony counting and calculation accuracy, and gives you quality control and reporting practice that withstands audit and accreditation.

Q3 What skills will I gain from the "Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B)" course?

You will develop four core skills: aseptic sampling and sample handling within holding times, pour plate, spread plate and membrane filtration technique, colony counting with CFU/mL calculation and dilution logic, and quality control, validation and result reporting practice.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q4 What tools, methods, or standards are covered in the "Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B)" course?

The course covers the purpose and scope of the heterotrophic plate count, its place in water and wastewater examination, the difference between HPC and total coliform and pathogen tests, interpretation and limits of HPC results, regulatory and guideline uses of HPC data, laboratory safety and biosafety levels and waste handling, sampling points and plans and representative sampling, sterile container selection and field technique, dechlorination and neutralisation of residual chlorine, holding times, temperature and transport conditions, sample identification, chain of custody and logging, sample receipt checks and rejection criteria, media preparation and sterilisation for HPC, pour plate procedure and agar temperature control, spread plate procedure for liquid samples, serial dilution technique and dilution blanks, inoculation volumes and countable range, incubation time and temperature, membrane filtration apparatus and aseptic setup, filtration volumes and filter handling, filter placing, incubation and reading, colony counting rules and counting aids, CFU/mL calculation from dilution factors, bench sheet recording of counts, dilutions and calculations, quality control samples of blanks, duplicates and spiked controls, media sterility and performance checks, precision and accuracy assessment, method validation, verification and uncertainty, documentation, bench sheets and traceability, and reporting results, units and interpretation.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q5 How is the "Heterotrophic Plate Count Standard Method for the Examination of Water and Wastewater (9215 A & B)" course applied in real-world practice?

Participants apply it to real work such as collecting and handling a water sample within holding time, preparing serial dilutions, running pour plate and membrane filtration tests, reading plates and counting colonies within the countable range, calculating CFU/mL from dilution factors, and completing QC records and bench sheets for accreditation. The same methods support method verification and result reporting.