

**SENIOR LABORATORY TECHNICIAN**  
**(WATER BOARD)**

**DISTINGUISHING FEATURES OF THE CLASS:** This position exists with the Upper Mohawk Valley Regional Water Board. This is technical laboratory work involving responsibility for carrying out routine tests for the sanitary, chemical and physical analysis of water. The incumbent must determine if the water being tested is of a satisfactory quality and meets all standards required by the New York State Health Department. A high degree of alertness and accuracy is required, since errors may result in danger to the health of the citizens of the community. The work is performed under general direction of the Bio-Chemist, who is available for consultation on difficult or unusual problems. Supervision is exercised over the activities of a small number of subordinates. This class is distinguished from Laboratory Technician by reason of the greater degree of technical and supervisory skills required. Does related work as required.

**TYPICAL WORK ACTIVITIES:** (Illustrative Only)

Conducts routine sanitary analysis of raw and treated water, including bacteriological and microscopic examinations;  
Prepares bacteriological cultures, stains, dyes and chemical solutions;  
Performs daily bacteriological testing, and when necessary, proficiency testing for coliform bacteria, performs standard plate and R2A counts;  
Interprets results of all tests;  
Conducts physical and chemical analysis and wet chemistries, including samples for color, turbidity, hardness, alkalinity, chlorides, iron, fluoride, pH value and related factors;  
Also conducts tests on mineral analysis and chemical balance;  
Inspects laboratory equipment to ensure proper condition including incubator, sterilizer, turbidimeter, water still, comparators and glassware;  
Performs routine equipment maintenance, as needed;  
Operates hot air oven in sterilizing laboratory glassware;  
Operates steam autoclave in sterilizing prepared media;  
Closely observes temperature and pressure gauges to ensure proper sterilization;  
Arranges necessary apparatus and glassware for testing water supplies;  
Performs bacteriological proficiency testing for coliform bacteria and standard plate count bacteria, as prescribed by State Health Department standards;  
Prepares bacteriological cultures, stains, dyes and media;  
Sets up equipment necessary in routine sanitary analysis of water, including bacteriological and microscopic examination;  
Records results of tests, and maintains a variety of records and reports related to activities in the water analysis laboratory;  
Supervises, and participates in, a wide variety of technical, clerical and housekeeping activities in the water analysis laboratory;  
Follows special handling procedures when working with contaminated specimens;  
Places prepared media solutions in test tubes and plugs in preparation for autoclaving;  
Checks laboratory safety practices and sees that they are carried out;

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**Typical Work Activities con't:**

Makes recommendations for improved procedures and systematizes work to ensure efficient operations;

Assists the Bio-Chemist with physical analysis and wet chemistries including samples for color, turbidity, hardness, alkalinity, chlorides, iron, fluoride, pH value and related factors;

Assists the Bio-Chemist with tests on water to determine mineral analysis and chemical balance;

Performs quality control evaluations on all phases of bacteriology laboratory work, as required by the New York State Health Department ELAP.

**FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:**

Good knowledge of aseptic techniques, testing practices, equipment, safety precautions and terminology used in a water analysis laboratory; good knowledge of the principles of bacteriology, biology, chemistry and physics as they relate to water analysis; demonstrated skill in the operation and care of water laboratory apparatus and equipment; ability to understand and carry out technical oral and written directions; ability to maintain technical records and prepare related activity reports; ability to lay out and supervise the work of others; thoroughness; dependability; high degree of accuracy; good hand and eye coordination; good judgement.

**MINIMUM QUALIFICATIONS:** Either:

- (A) Graduation from a regionally accredited or New York State registered college or university with a Bachelor Degree in one of the physical or applied sciences, including or supplemented by twelve (12) semester credit hours in general microbiology; **OR**
- (B) Graduation from a regionally accredited or New York State registered college or university with an Associate Degree in one of the physical or applied sciences, including or supplemented by twelve (12) semester credit hours in general microbiology, **AND** two (2) years of environmental analysis experience in a clinical, public health or environmental laboratory.

**NOTE:** Verifiable part-time experience will be pro-rated toward meeting full-time experience requirements.