

**TITLE: Laboratory Analyst I - III**

**DEFINITION:** Under general direction, performs assignments while maintaining and evaluating water quality control parameters in the testing and analyzing of constituents.

**DISTINGUISHING CHARACTERISTICS:**

Grade Level I	Performs routine bacteriological tests of potable water and wastewater in accordance with standard procedures; performs routine chemical analysis using both classical and instrumental methods.
Grade Level II	Performs work at a higher technical level relating to identification of bacteria, algae, and protozoa; performs chemical analysis using more advanced instrumental methods; develops and tests new procedures and techniques; and performs peer review of data
Grade Level III	Performs work of a lead position; interprets and reports data to Laboratory Information Management System (LIMS); develops and maintains QA/QC (Quality Assurance\Quality Control (QA\QC) procedures to ensure quality of data; researches and develops new methods as needed, to keep current with the Environmental Protection Agency (EPA) and State Water Resources Control Board (SWRCB) drinking water monitoring requirements; must be a resident expert and in a lead capacity to train lower level analysts in work methods, statistical analysis, and instrumental techniques.

**EXAMPLES OF DUTIES:**

- Develops and maintains laboratory QA/QC program to ensure data and resulting decisions are technically sound, valid and updated;
- Interprets and evaluates water quality data for Quality Assurance/ Quality Control (QA/QC) compliance; performs peer review of analytical data and reporting of results;
- Assigns and reviews the work of subordinate personnel;
- Utilizes LIMS for data reporting and storage;
- Prepares and presents written reports for state and federal regulatory agencies;
- Performs chemical and bacteriological analyses of potable water and other environmental samples for water quality assessment and evaluation;
- Researches, selects, adapts, and/or develops new methods and techniques for conducting tests and analyses as required by Standard Methods and Environmental Protection Agency (EPA) to ensure compliance with the drinking water monitoring requirements;

- Operates and maintains inductively coupled plasma mass spectrometer (ICPMS), ion chromatograph (IC), atomic absorption (AA) spectrophotometers, and gas chromatograph/mass spectrometer (GCMS) and, report data with the necessary quality controls for precision and accuracy;
- Performs microscopic examination of water samples for identification of algae and protozoa;
- Measures pH, conductivity, turbidity, and color;
- Measures fluoride, nitrate, and ammonia using ion-specific electrodes;
- Analyzes annual performance evaluation tests to maintain laboratory State certification for metals, organic, microbiological and general/physical parameters in drinking and waste water matrices;
- Maintains all equipment in clean and operational condition;
- Prepares calibration standards, reagents and working solutions for analyses;
- Maintains laboratory instrumentation and test equipment through troubleshooting and preventative maintenance;
- May drive City vehicles to collect water samples from City-wide sources for testing;
- Maintain test records and files;
- Performs other related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience

- Bachelor's degree in Chemistry, Biology, Microbiology or a closely related field from an accredited four-year college or university.
- Ability to safely operate and maintain instruments and equipment, including ICPMS, IC, atomic absorption spectrophotometers, balances and microscopes; perform chemical and bacteriological analysis of water samples; and develop scientific conclusions.
- Technical potable water or wastewater laboratory experience offering specific and substantial preparation for the duties of the position may be substituted for up to two years of the required education on a year- for- year basis.

A valid California motor vehicle operator's license is required.

**HISTORY:**

- Approval/Adoption Dates: 08/16/89
- Title change from Laboratory Technician: 8/16/89
- Grade level II established to replace Senior Laboratory Technician: 9/1/84
- Revised 12/04/19
- Approved by Commission 12/04/19