

9921

CHEMIST 2

Nature of Work

Under general supervision, performs professional work at the basic full-performance level conducting complex tests and analyses on raw, natural and processed substances using chemical and physical laboratory procedures in order to determine chemical composition or deviation from standards. Work is reviewed by a higher level chemist or supervisor through review of reports and records, and accuracy of test results. May supervise or lead lower level chemists, technicians and field staff. May be exposed to hazardous or unknown substances. Assignments may include agricultural products, air and/or water and wastewater, construction materials, environmental health, or food purity. Performs related work as required.

Distinguishing Characteristics

May be distinguished by bench testing predominantly organic substances using specialized automated equipment. The variety of procedures and analyses require theoretical knowledge of the assigned area. Work is characterized by the variety and complexity of procedures and the relative independence in evaluating samples and recommending follow-up action.

Examples of Work

- Performs standardized test procedures requiring a wide variety of manual and instrumental analyses.
- Performs qualitative and quantitative analysis of a variety of agricultural products such as meat, food and pesticides to determine safety and compliance with standards.
- Analyzes water samples and wastewater samples to determine safety compliance and the presence of harmful organic and inorganic pollutants.
- Collects and analyzes air samples; analyzes samples by gas chromatography, mass spectrometry and associated techniques. associated techniques.
- Analyzes and tests reports on hazardous waste management.
- Recommends issuance of permit for the disposition of chemical materials.
- Operates a variety of standard chemical laboratory equipment, such as spectrophotometer, atomic absorption photometer, PH meter, gas chromatograph and extractors.
- Calibrates and maintains test equipment by following prescribed procedures.
- May perform analysis and tests of materials used in construction or in determining the effect of construction projects on the environment.
- May perform standard tests on medical specimens using fluorometric methodology and related procedures to determine need for additional patient treatment.

CHEMIST 2 (CONT'D)**Knowledge, Skills and Abilities**

Knowledge of the theoretical principles of analytical chemistry.

Knowledge of laboratory techniques, equipment and terminology.

Knowledge of instrumental procedures and techniques in gas chromatography, spectrophotometry, flame photometry and related procedures, as well as a variety of more conventional titration, extraction, purification and related procedures.

Knowledge of the laws and regulations pertinent to analytical work and substance usage standards.

Ability to carry-out complex laboratory techniques; ability to determine test adaptation or modification needed and acceptable in specific situations.

Ability to perform complex test sequence analysis, verify data, interpret findings, locate and independently correct routine problems and maintain accurate test records.

Ability to prepare laboratory test reports.

Minimum Qualifications

TRAINING: Graduation from an accredited four-year college or university with a major in the basic or natural sciences and eighteen (18) semester hours (27 quarter hours) in chemistry.

TRAINING FOR THE DEPARTMENT OF HEALTH AND HUMAN RESOURCES, OFFICE OF LABORATORY SERVICES ONLY: Bachelor's degree from an accredited four-year college or university plus eighteen (18) semester hours (27 quarter hours) in chemistry.

EXPERIENCE: One year of full-time or equivalent part-time paid experience in benchwork in a laboratory.

Established: 8/15/92
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