

**GENERAL DESCRIPTION OF CLASS**

The CHEMIST 1 provides accurate and timely detection and identification of chemical and radiochemical contaminants and constituents on a variety of environmental, agricultural, and biological samples by performing standard tests and procedures.

**DISTINGUISHING FEATURES**

This is the first level of a three-level series. The emphasis of this class is on performing standard chemical and physical tests and procedures on a production basis. It is distinguished from the higher level by the absence of performing technically complex tests and procedures whose results require more than routine interpretation and correlation with other information. At this level employees generally do not exercise independent scientific judgment in the interpretation of data nor make recommendations on the application of the findings. Employees in this class may perform analyses, under supervision, requiring more complex analytical techniques.

**DUTIES AND RESPONSIBILITIES**

Allocation of positions to this class will depend on the total work performed which may include one or a combination of the duties or tasks listed below.

- 1.**Benchwork.** Typical tasks: logs in sample or specimen noting date, time, and tests to be performed; prepares necessary equipment and organizes supplies and reagents; prepares samples for testing by diluting, filtering, centrifuging, digesting; performs standard chemical or radiochemical tests (i.e. spectrophotometric analyses for phosphates, chemical oxygen demand; titrametric analyses for dissolved oxygen and chloride; or other analyses, as appropriate, such as color, turbidity, particulate matter, moisture, or carbon), which may require standard interpretation and correlation with other information; may assist in performing analysis requiring complex analytical techniques; runs quality control samples with known values, to determine if procedures and results are within acceptable limits; calculates numerical results based on calibrations; may collect, or assist in collecting, samples for analysis.
- 2.**Reports.** Typical tasks: enters results of test in appropriate log or computer; completes appropriate test result form and notifies supervisor in cases of significant test findings; completes daily and monthly reports including number and types of tests performed; maintains accurate and up-to-date records detailing quality control procedures used and results for all tests.
- 3.**Miscellaneous.** Typical tasks: may perform routine calibration and minor maintenance of laboratory equipment; informs supervisor of inventory and supply needs; may testify on the methodology used and the results of tests conducted when those results are evidence in cases of litigation; keeps current in field by reading literature and attending symposiums and workshops; maintains knowledge of general laboratory operations.

**RELATIONSHIPS WITH OTHERS**

Employees in this class may have occasional in-person or telephone contact with agency staff to exchange information or discuss test results. They may have infrequent contact by phone with governmental agencies, industrial and business representatives, and other organizations to discuss issues pertaining to a sample or specimen.

#### **SUPERVISION RECEIVED**

Employees in this class work under general supervision of a laboratory supervisor or other administrative superior. Test data, results, reports, and any standard interpretation are reviewed routinely. Records are reviewed for quality control. Guidelines used in performance of duties include standard operating procedures, established methodology manuals, technical references, and applicable State and Federal regulations.

#### **GENERAL INFORMATION**

Positions are found in central and remote locations throughout State government (e.g., general government agencies, natural resource agencies, higher education institutions, or hospitals.). They require the willingness to work within the environment associated with the position's location (usually a laboratory).

**KNOWLEDGE, SKILLS, AND ABILITIES (KSA)**

Basic knowledge of laboratory and chemical principles, terminology, material, equipment, procedures, and techniques.

Basic knowledge of various fields of chemistry such as organic and inorganic.

Basic knowledge of various laboratory testing procedures such as spectroscopic, titrametric, and microscopic.

Basic knowledge of the operation and maintenance of various standard laboratory instruments and equipment.

Basic knowledge of the techniques required for general laboratory safety and the proper handling of hazardous materials.

Skill in preparing laboratory samples, reagents, and solutions.

Skill in the care and handling of laboratory samples.

Skill in performing standardized laboratory tests.

Skill in operating standard laboratory equipment and instruments.

Skill in reading and following scientific laboratory methods and procedures.

Skill in calibrating and maintaining standard laboratory equipment.

Ability to interpret standard test results.

Ability to determine appropriate test equipment or instruments to be used.

Ability to perform highly repetitive tasks while maintaining accuracy and speed.

Ability to organize and prioritize work.

Ability to communicate orally and in writing to gather and exchange information.

Ability to work with flammable, corrosive, reactive, toxic, radioactive, or irritating substances on a regular basis.

**NOTE:** The KNOWLEDGE and SKILLS are required for initial consideration. ABILITIES may be required for initial consideration, at any time during the selection process, or during a trial service period as a final stage of the selection process. Some duties performed by positions in this class may require different KSA's. No attempt is made to describe every KSA required for **all** positions in this class. Additional KSA requirements will be explained on the recruiting announcement.

Adopted 1/90

Revised

Examples of work are typical of duties assigned to this class. No attempt is made to describe every duty performed by all positions in this class.