

CHEMIST 1

KIND OF WORK

Professional work performing chemical analysis in a laboratory setting.

NATURE AND PURPOSE

Under general supervision, an employee in this class is responsible for performing chemical analysis, making observations, taking measurements, and conducting chemical tests in accordance with accepted scientific principles and techniques. Exercises judgment when interpreting outcomes of analysis and testing and in the methods and procedures to be used. May provide work direction to lower level technical and paraprofessional staff, as well as provide training to less experienced Chemists and/or technicians. Performs related work as required. This class differs from a Chemist Aide in that it independently performs a variety of professional chemical analysis. It differs from a Chemist 2 in the level of complexity of the analysis and result interpretation, as well as in the amount and level of work direction provided to others.

EXAMPLES OF WORK (A position may not include all the work examples given, nor does the list include all that may be assigned.)

Analyze chemical and physical laboratory samples so that analysis is completed within a timely and accurate manner by making use of methods and priorities established by the agency; carrying out analysis of perishable items within specified time frames; performing analysis of water, soil, plant and animal tissue; making physical and chemical analysis of surface and potable waters, industrial wastes, sewage, and other materials involving known or potential pollution problems; making standard chemical analysis of dairy and food products, feeds, fertilizers, determining toxicity and /or fitness for sale; rechecking samples that are non-conforming

Apply required chemicals, equipment and supplies so that analysis is carried out with minimum delays by calling attention to any deficiencies in chemicals, supplies, or equipment; reporting malfunctions to supervisory staff; maintaining equipment to ensure proper test results and response to clientele; making tests for penetration, ductility, specific gravity, and viscosity; ensuring that proper equipment is used to guarantee proper test results.

Implement quality control measures so that the laboratory and clientele are assured of the reliability of results by preparing fresh known standards, spiked samples, replicate analysis, and sample splits with cooperation of outside laboratories; making comparisons with certified standards; taking care in handling and processing samples.

Write reports of results of laboratory analysis to satisfy the needs of the laboratory and clientele by tabulating sample registration and analytical notebooks; completing analytical forms; drafting memos and detailed written reports as dictated by analysis and clientele needs.

Answer technical and informational questions from clientele concerning sampling, analysis, or interpretation so that questions are answered to the satisfaction of the clientele by documenting all analytical procedures; communicating a working knowledge of procedures and chemical and biological systems when answering questions.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED

Knowledge of:

Principles, procedures, and techniques of analytical chemistry sufficient to carry out assigned chemical analysis in the laboratory.

Chemical laboratory test equipment sufficient to choose, operate, and maintain equipment for use in assigned chemical analysis.

Ability to:

Organize, analyze, and present data from research with scientific accuracy and thoroughness sufficient to keep clientele informed as needed.

Understand and follow complex oral and written directions, formulas, and charts sufficient to assemble research material and perform required chemical analysis.

Follow approved scientific laboratory methods sufficient to ensure the accuracy and validity of test results.

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Ckd: 09/68
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TC: 04/89
Former Title(s): Chemist