



New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

CHEMISTS

Class Title	Class Code	Pay Band	Alt Pay Band*
Chemists-B	F2031B	55	
Chemists-O	F2031O	60	
Chemists-A	F2031A	65	

**In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.*

Occupation Description

Conduct qualitative and quantitative chemical analyses or chemical experiments in laboratories for quality or process control or to develop new products or knowledge.

Nature of Work

Everything in the environment, whether naturally occurring or of human design, is composed of chemicals. Chemists search for new knowledge about chemicals and use it to improve life. Chemical research has led to the discovery and development of new and improved synthetic fibers, paints, adhesives, drugs, cosmetics, electronic components, lubricants, and thousands of other products. Chemists' research on the chemistry of living things spurs advances in medicine, agriculture, food processing, and other fields. They investigate the properties, composition, and structure of matter and the laws that govern the combination of elements and reactions of substances to each other. In applied Research and Development, these scientists create new products and processes or improve existing ones, often using knowledge gained from basic research.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role assist in chemical analysis or experiments.
- Employees may create new products and processes or improve existing ones, often using knowledge gained from basic research and following established methods.
- Employees will use computer programs along with a variety of sophisticated electronic laboratory instrumentation.

Recommended Education and Experience for Full Performance*

Bachelor's Degree in Chemistry or closely related field, and one (1) year paid experience in chemical experimentation and analysis in a laboratory setting.

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Minimum Qualifications

Bachelor's Degree in Chemistry or closely related field. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling four (4) years may substitute for the required education and experience.

Operational

- Employees in this Role analyze complex data and test chemical compounds simultaneously to find compounds with desired properties.
- Employees write documents, analyze results, and create formal reports; may also prepare instructions that specify ingredients, mixing times, and temperatures for each stage in the process; monitors automated processes to ensure proper product yield; test samples of raw materials or finished products.
- Employees use and maintain electronic instrumentation, and evaluate instrument performance.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Chemistry or closely related field, four (4) years paid experience in chemical experimentation and analysis in a laboratory setting.

Minimum Qualifications

Bachelor's Degree in Chemistry or closely related field, and two (2) years paid experience in chemical experimentation and analysis in a laboratory setting. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Advanced

- Employees in this Role ensure compliance with industry and government standards, including the regulations governing pollution.
- Employees record and report on test results and develop and/or improve existing methods; determine the structure, composition, and nature of substances by examining and identifying the various elements or compounds that make up a substance; research, and apply the chemistry of carbon compounds and the physical characteristics of atoms and molecules; and investigate how chemical reactions work; synthesize elements or simple compounds to create new compounds or substances that have different properties; work with compounds such as those in electronic components; recommend and write specifications for new analytical instruments.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Chemistry or closely related field, and six (6) years paid experience in chemical experimentation and analysis in a laboratory setting.

Minimum Qualifications

Bachelor's Degree in Chemistry or closely related field, and four (4) years paid experience in chemical experimentation and analysis in a laboratory setting. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

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Knowledge and Skills

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Knowledge

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Clerical — Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Skills

Science — Using scientific rules and methods to solve problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Speaking — Talking to others to convey information effectively.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

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Mathematics — Using mathematics to solve problems.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions,* and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Non-Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001

Revised: 9/20/2011

**Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.*

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.