State of Nebraska
Classification Specification
Department of Administrative Services

NEBRASKA
Good Life. Great Service.

Click one of these links to see the Job Description for that class:

Scientist/Laboratory

M53021 – V53024

DESCRIPTION OF OCCUPATIONAL WORK

Positions in this class series work within laboratory environments performing laboratory support, laboratory technical, professional scientific, or supervisory duties to insure conformity with consumer protection or public health regulations, and/or for epidemiological surveillance. Laboratory specialty areas may include chemistry, microbiology, and biochemistry. Specific assignments will vary by level but may include the performance of routine to complex laboratory procedures; the set-up, operation, and maintenance of laboratory equipment and laboratory work areas; statistical analyses; and interpretation and reporting of test results.

Allocation to levels within this series are based on the type of tasks performed and the repetitiveness of tasks, the amount of judgment or discretion allowed, the level of analysis performed, the equipment or instruments used, the amount of interpretation performed, the type of supervision received, and whether procedures are devised, reviewed, or followed.

This series is distinguished from the State Patrol Forensic Scientist series, where positions perform specialized forensic examinations and analyses to assist law enforcement and the criminal justice community with criminal investigations.

Scientific Technician

M53021

DISTINGUISHING CHARACTERISTICS: (A position is assigned to this class based on the scope and level of work performed as outlined below.)

Under immediate to general supervision, positions at this level perform repetitive, well-defined laboratory tests or analyses. Use of instrumentation and equipment is routine and rarely requires special instruction. Judgment in analysis of results is limited and under supervision. Assignments may involve a number of steps, tests, and/or pieces of equipment and include logging or entering data, reporting findings, preparing test materials and samples, and cleaning and setting up equipment. May conduct tests and examinations involving biological, microbiological, and other scientific applications and analyze human or animal specimens.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Tests or analyzes specimens and samples using chemical, microbiological, serological, or biological bench techniques and agency laboratory protocols and procedures to screen, identify, count, confirm, match, measure, or otherwise examine targeted substances or organisms.

Mixes or generates stains, culture media, solutions, and/or reagents to test or process microscopic, chemical, environmental, and/or biological specimens and samples.

Operates and cleans laboratory equipment, such as centrifuges, autoclaves, agitators, spectrophotometers, gas chromatographs, microscopes, analytical balances, volumetric glassware, ovens, incubators, pipettes, automatic pipette machines, pH meters, fluoride electrodes, titration burets, surgical instruments, and distillation equipment, to analyze, test or prepare specimens and samples.

Enters, logs, and/or inventories specimens, samples, data, or findings to record, report, or document receipt, acceptability, condition, procedures, results, and equality control results for review by senior staff members.

Mixes stains, culture media, solutions, and reagents to produce materials or controls for use in testing and/or in processing microscopic and biological specimens.

Writes or enters laboratory notes on bench worksheets, laboratory logs, computer terminals, or quality control sheets to record the results or data of laboratory tests and to provide information for laboratory records management.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED: (These are needed to perform the work assigned.)

Knowledge of: laboratory bench techniques; principles of chemistry or biology; chemical, biological, or microbiological terminology; the hazards and safety precautions of laboratory testing activities; chemical, biological, environmental, or microbiological methodology; agency and laboratory organization and priorities.

Ability to: operate laboratory equipment assigned; identify chemical or biological substances through or for laboratory testing and analysis; perform detailed, sequential tests and analysis on chemical or biological materials; calculate solutions to arithmetical problems involving addition, subtraction, multiplication, division, decimals, fractions, and percentages; complete laboratory reports and records.

MINIMUM QUALIFICATIONS: (Applicants will be screened for possession of these qualifications. Applicants who need accommodation in the selection process should request this in advance.)

Experience performing laboratory bench procedures in a chemical environmental, microbiological, or biological laboratory OR Post high school coursework/training in laboratory bench techniques, biology, microbiology, or other biological/life sciences.

Return to Specification List

Scientist I

E53022

DISTINGUISHING CHARACTERISTICS: (A position is assigned to this class based on the scope and level of work performed as outlined below.)

This is the career level of this series where positions may conduct a variety of chemical, biological, and/or physical tests and analyses under limited supervision. Positions will be assigned more complex analysis methods than positions in the Scientific Technician level, such as DNA or antibody-based methods in a microbiology lab or chromatography in a chemical lab. Work is still performed according to established methodologies, but teammates may troubleshoot tests and equipment with some supervisory assistance. Any changes to established protocols require approval from a higher-level scientist. Positions at this level may also provide technical guidance to other laboratory staff on analytical procedures or laboratory operations.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Examines food, paint, petroleum product, metal, cement, concrete, feed, fertilizer, pesticide, environmental, animal, or human specimens or samples using chemical, physical and/or biological analysis procedures to determine the composition and physical properties of the specimens, to screen for and identify analytes such as drugs, poisons, or pesticides, microorganisms, or nutritionally valuable compounds and/or to confirm the presence of any chemical, biological, public health or environmental hazards.

Prepares reagents, compounds, solutions, cultures, or catalysts for use in testing and/or processing samples.

Operates, calibrates, and cleans or repairs laboratory instruments and equipment such as mass spectrophotometers, gas and liquid chromatographs, analytical balances, extraction apparatus, molecular biology analyzers, immunoassay equipment, or pH meters.

Tests new and/or improved laboratory methods and procedures to assist other chemists in assessing possible applications for the solution of technical laboratory problems.

Records or enters and documents data on daily analysis activities and findings to comply with record keeping requirements and to ensure information is available for future study and/or presentation.

Interprets read-outs, or other instrument data to determine or analyze test results.

Reviews and evaluates procedures and equipment; makes recommendations to laboratory supervisors regarding their purchase and inclusion in the laboratory.

May advise laboratory staff and agency officials on test results and their interpretation.

May testify at judicial and/or administrative hearings to explain, interpret and provide information on the findings and conclusions of laboratory tests.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED: (These are needed to perform the work assigned.)

Knowledge of: chemistry, biology, or related field; agency laboratory procedures and protocols; laboratory safety and sanitation practices; chemical, biological, environmental, and/or microbiological methods; agency and laboratory organization and priorities; state law and rules and agency policies, procedures, and standards governing the analysis of chemical or biological samples; knowledge of lab instrumentation, operation, and calibration; quality management principles; information sources and research literature pertinent to agency chemical analysis functions; techniques of training and leading others.

Skill in: applying analytical principles and performing analyses; reviewing scientific literature for analytical method references; operating computers and laboratory equipment; interpreting laboratory results; calculating mathematical and statistical problems; maintaining laboratory instruments and work environment in a safe and operable condition; summarizing findings and conclusions of tests and analyses into technical laboratory reports; reviewing the work of other scientists.

Ability to: communicate effectively; interact with laboratory staff and the public; understand and follow supervisory instructions, equipment operation manuals, and safety policies; evaluate agency laboratory testing and analysis procedures, guidelines, and standards; calculate solutions to mathematical and statistical problems; compare the specifications of laboratory equipment, instruments, and materials to agency product standards; advise representatives of other organizations and local agencies on the technical practices and standards of a laboratory function; instruct other laboratory staff in the policies, procedures, and standards of a laboratory function.

MINIMUM QUALIFICATIONS: (Applicants will be screened for possession of these qualifications. Applicants who need accommodation in the selection process should request this in advance.)

At least one year of post high school coursework/training in chemistry, biology, or related field and one year of experience in a scientific laboratory.

Return to Specification List

Scientist II

E53023

DISTINGUISHING CHARACTERISTICS: (A position is assigned to this class based on the scope and level of work performed as outlined below.)

Positions at this level are considered the specialist level. Teammates utilize critical thinking skills, advanced knowledge, experience, and potentially additional training to perform complex chemical, physical, and/or biological analyses with minimal supervision. Positions are also assigned advanced lab functions such as developing, evaluating, and validating lab methods and protocols, serving as the scientific peer to the Laboratory Supervisor, or troubleshooting methodologies with little to no supervision. Teammates are expected to maintain expertise and on-going training in the assigned methods, and some positions may require proficiency tests in the relevant discipline. Positions may act in a lead-worker capacity by training lab personnel, coordinating and assigning day-to-day lab functions, and troubleshooting testing issues.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Examines food, paint, petroleum product, metal, cement, concrete, feed, fertilizer, pesticide, environmental, animal, or human specimens or samples using chemical, physical and/or biological analysis procedures to determine the composition and physical properties of the specimens, to screen for and identify analytes such as drugs, poisons, or pesticides, microorganisms, or nutritionally valuable compounds and/or to confirm the presence of any chemical, biological, public health, safety, or environmental hazards.

Prepares reagents, compounds, solutions, cultures, or catalysts for use in testing and/or processing samples.

Operates, calibrates, and cleans or repairs laboratory instruments and equipment such as mass spectrophotometers, gas and liquid chromatographs, analytical balances, extraction apparatus, molecular biology analyzers, immunoassay equipment, and pH meters.

Develops new and/or improved laboratory methods and procedures to assist other chemists in assessing possible applications for the solution of technical laboratory problems.

As lead worker/team leader, trains other laboratory staff in laboratory practices and procedures to improve employee performance levels and to improve the accuracy of analyses.

Develops and validates test methods according to technical guidelines; recommends selection and inclusion of new lab equipment; assists with equipment installation, calibration, and maintenance.

Participates in in-service training programs and research programs.

Records or enters and documents data on daily analysis activities and findings to comply with record keeping requirements and to ensure information is available for future study and/or presentation.

Interprets read-outs or other data from moderate to high complexity lab instrumentation to determine or analyze results of tests and analyses.

In a quality assurance setting, performs tasks in support of laboratory accreditation or certification maintenance.

May perform all functions related to the operation and maintenance of the Agriculture Standards Laboratory in accordance with the National Bureau of Standards and the Nebraska Weights and Measures Act, including determining equipment needed for lab and field inspectors, maintaining records, instructing inspection personnel in the proper use of standards of mass, volume and length measurement instruments, and calibrating all standards of mass, volume, and weight used by business and industry, research/educational entities, and government in Nebraska.

May schedule, distribute, and/or guide the work assignments of other laboratory staff to meet workflow/assignment requirements.

Advises laboratory staff and agency officials on test results and their interpretation. May testify at judicial and/or administrative hearings involving the consideration of chemical analyses to explain, interpret and provide information on the findings and conclusions of laboratory tests.

May prepare manuals and guidelines on materials and test procedures.

May coordinate the work of outside agencies performing related testing for the State.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED: (These are needed to perform the work assigned.)

Knowledge of: chemistry, biology, or related field; agency laboratory procedures and protocol; laboratory safety and sanitation practices; chemical, biological, environmental, and/or microbiological methods; agency and laboratory organization and priorities; principles of training and leadership; routine laboratory operations and workflow; quality management principles; state laws and rules and agency policies, procedures, and standards governing the analysis of organic and inorganic materials; advanced knowledge of lab instrumentation, operation, and calibration; information sources and research literature pertinent to agency chemical analysis functions; techniques of training and leading others.

Skill in: applying analytical principles and performing analyses; reviewing scientific literature for analytical method references; operating computers and laboratory instruments; interpreting and/or troubleshooting laboratory results; calculating mathematical and statistical problems; maintaining laboratory instruments and work environment in a safe and operable condition; summarizing findings and conclusions of tests and analyses into technical laboratory reports; reviewing the work of other chemists; instructing other laboratory staff in laboratory policies and procedures; the technical repair of specialized equipment beyond routine maintenance and calibration.

Ability to: communicate effectively; interact with laboratory staff and the public; understand and follow supervisory instructions, equipment operation manuals, and safety policies; design and evaluate agency laboratory testing and analysis procedures, guidelines, and standards; compare the specifications of laboratory equipment, instruments, and materials to agency product standards; advise representatives of other organizations and local agencies on the technical practices and standards of a laboratory function; instruct other laboratory staff in the policies, procedures, and standards of a laboratory function; set work priorities and schedules for other laboratory staff; delegate tasks to others.

MINIMUM QUALIFICATIONS: (Applicants will be screened for possession of these qualifications. Applicants who need accommodation in the selection process should request this in advance.)

Bachelor's degree with major in chemistry, biology or related field OR Post high school coursework/training in chemistry, biology or related field AND three years of experience in a scientific laboratory.

Laboratory Section Supervisor

V53024

DISTINGUISHING CHARACTERISTICS: (A position is assigned to this class based on the scope and level of work performed as outlined below.)

This is the supervisory level for this series. Under limited supervision, positions plan, manage, and supervise assigned laboratory staff and the activities of a lab section or independent program. Positions advise other agencies or officials on laboratory analysis procedures or results and may conduct chemical, physical, and/or biological analyses as needed.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Plans, organizes, assigns, and directs the work activities of assigned laboratory staff to facilitate the attainment of section work goals and to ensure the consistent application of administrative and/or technical policies, procedures, laboratory protocols, and guidelines.

Counsels, advises, and confers with assigned laboratory staff, to exchange information and/or explain laboratory policies, procedures, standards, and guidelines and to identify the characteristics and impact of work-related problems and formulate possible solutions.

Reviews, evaluates, and compares work performance and/or products of assigned laboratory staff with established standards and official laboratory protocols to determine employee production levels, career advancement potential, training needs, and appropriate personnel actions such as appointments, promotions, disciplinary actions, status changes, separations, and grievance dispositions for recommendation to agency laboratory management.

Trains assigned staff in the principles, practices, policies, and/or procedures of laboratory analysis and the work section, to maintain and/or improve the production levels of employees in accordance with established work performance standards.

Coordinates scheduling, reporting, and the maintenance of confidentiality within the section and the operations and activities directed with other agency laboratory units or sections and local, state, and/or federal agencies to ensure prompt reporting of results to meet the testing and certification needs of other agencies and to facilitate the attainment of agency and section work goals and requirements.

Advises laboratory staff and officials of other public and private agencies participating in laboratory evaluation and certification programs to ensure adherence to testing procedures and certification standards and to facilitate continuance of quality control in laboratory settings.

Examines food, paint, petroleum product, metal, cement, concrete, feed, fertilizer, pesticide, environmental, animal, or human specimens or samples using chemical, physical and/or biological analysis procedures to determine the composition and physical properties of the specimens, to screen for and identify such as drugs, poisons, or pesticides, microorganisms, or nutritionally valuable compounds and/or to confirm the presence of any chemical, biological, public health or environmental hazards.

Develops, designs, adapts, tests, and/or recommends new and/or revised laboratory examination or analysis policies, procedures, plans, instruments, and equipment to acquire, provide, and/or implement means for improving work section operation or for increasing laboratory capacity; to verify suitability of methods and devices for meeting laboratory analysis requirements.

Assesses and recommends staff, material, and equipment needs for the laboratory work section supervised for the preparation of the laboratory budget.

Plans, organizes, and arranges inventory and requisitioning of laboratory supplies and materials to ensure that an adequate level is maintained.

Confers with agency laboratory management on the administration of laboratory activities such as evaluation materials preparation, on-site evaluations, evaluation report preparation, and interpretation of laboratory, agency, state, and federal regulations, to coordinate laboratory operations.

Summarizes laboratory test findings and resulting conclusions to provide reports to laboratory and agency management.

Testifies at judicial and/or administrative hearings involving consideration of laboratory analyses, to explain, interpret, and provide information on the findings and conclusions of laboratory tests.

Represents the laboratory to provide scientific expertise and speak for the agency or section at meetings, training sessions, public-speaking engagements, or other functions.

Writes or directs the writing of letters, memoranda, reports, procedures, protocols, or other documents to prepare and maintain the correspondence and records of the section.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED: (These are needed to perform the work assigned.)

Knowledge of: chemistry, biology, or related field; agency laboratory procedures and protocol; laboratory safety and sanitation practices; chemical, biological, environmental, and/or microbiological methods; agency and laboratory organization and priorities; principles of training and leadership; laboratory operations and workflow; quality management principles; state laws and rules and agency policies, procedures, and standards governing the analysis of organic and inorganic materials; lab instrumentation, operation, and calibration; scientific literature and other external references regarding chemical, physical, and/or biological analysis; quality management principles; interrelationships between the laboratory and state programs.

Skill in: applying analytical principles and performing analyses; reviewing scientific literature for analytical method references; operating computers and laboratory instruments; interpreting and/or troubleshooting laboratory results; calculating mathematical and statistical problems; maintaining laboratory instruments and work environment in a safe and operable condition; summarizing findings and conclusions of tests and analyses into technical laboratory reports; reviewing the work of other chemists; instructing other laboratory staff in laboratory policies and procedures; the technical repair of specialized equipment beyond routine maintenance and calibration; coordinating resources to meet operational objectives; evaluating test results and methods; setting and accomplishing laboratory section goals.

Ability to: communicate effectively; interact with laboratory staff, agency management, and the public; compare the specifications of laboratory instruments, equipment, and material to agency analytical requirements and produce standards; recommend and advocate procedural changes and technical interpretations; plan, assign, direct, and evaluate the work of assigned laboratory analysis and technical staff; advise representatives of other organizations and local agencies on the technical and administrative practices and standards of a laboratory testing function.

MINIMUM QUALIFICATIONS: (Applicants will be screened for possession of these qualifications. Applicants who need accommodation in the selection process should request this in advance.)

Bachelor's degree with major in chemistry, biology or related field OR Post high school coursework/training in chemistry, biology or related field and three years of experience in a scientific laboratory. One year of experience leading or coordinating the work of others.

Return to Specification List

LEGAL REQUIREMENTS: (These qualifications are mandated by federal/state laws, statutes, and/or regulations.)
There are no legal requirements for any levels within this series.

SPECIAL NOTES APPLICABLE TO ALL LEVELS:
Individual Scientist positions may require coursework and/or experience in specialized scientific and related disciplines such as biology or chemistry, or others relevant to specialty area and/or require certain certifications to perform assigned work.

Personnel in the Nebraska Department of Agriculture Laboratory that perform work associated with the Food and Drug Administration (FDA) may be required to obtain an FDA commission after hire. Minimum FDA Commission requirements include U.S. Citizenship.

State agencies are responsible to evaluate each of their positions to determine their individual overtime eligibility status as required by the Fair Labor Standards Act (FLSA).

Established: July 2021

Note: Classification-specification is subject to change. Please refer to the Nebraska State Personnel Job Specification website at https://das.nebraska.gov/personnel/classcomp/jobspecs/jobspecs.html to ensure this represents the most current copy of the description.

The following is a summary of changes made to this class specification.

Section	Change Description	Effective Date