

Laboratory Scientist 2

I. KIND AND LEVEL OF WORK

Second-level, professional microbiological, chemical, clinical, physical, or environmental analysis work.

II. DISTINGUISHING CHARACTERISTICS

Under general supervision, leads and performs complicated newborn screenings or microbiological, chemical, clinical, physical, or environmental examinations to determine the presence and levels of microbiological analytes, genetic material, chemical analytes, or biomarkers and correct hazardous situations that may pose a human, animal, or environmental risk in accordance with state and federal regulations. Independently conducts sample testing, extractions, data analysis, or arrays and assists more senior laboratory scientists with complex testing. Standard policies and procedures are followed; however, incumbents are generally able to determine how work is accomplished, and the order of tasks. In this class incumbents are responsible for identifying problems that occur during examination, troubleshooting the problem, making resolution recommendations, and taking remedial action when appropriate. At this level, employees are technical experts and may serve as lead workers in the absence of a more senior laboratory scientist. Daily work is performed independently; however, work is periodically reviewed by a more senior laboratory scientist or supervisor.

The Laboratory Scientist 2 differs from the Laboratory Scientist 1 in examination and investigation scope, depth, and role, with the Laboratory Scientist 2 performing more complicated work, troubleshooting, and investigative research with a greater depth of expertise. In addition, the Laboratory Scientist 2 assists with or participates in the development and evaluation of new methodologies.

The Laboratory Scientist 2 differs from the Laboratory Scientist 3 in examination scheduling, data packet, training, and lead work responsibilities as well as in the breadth and depth of knowledge required to sufficiently complete work assignments.

III. EXAMPLES OF WORK/DUTIES

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

- Calibrates, cleans, maintains, and aligns equipment to maintain proper working condition so that sample testing is not disrupted using procedures provided by unit leader or manufacturer's manual;
- Performs validations and evaluations of new laboratory methodology and analytical instrumentation and ongoing method improvements and diagnostic assays as assigned by unit supervisor or lead worker;

- Performs newborn screenings or microbiological, chemical, clinical, physical, pesticide, or environmental examinations of animal & human food, vegetation (seeds & plants) and water using advanced analytical instrumentation independently or under the guidance of a more senior laboratory scientist;
- Investigates examination anomalies and escalates the more difficult unresolved anomalies to the lead work or supervisor;
- Interprets large volumes of complex data using multiple analytical software programs;
- Compiles, reviews, and assesses analysis information so that the data reported is complete and of sufficient quality for its intended purpose;
- Troubleshoots quality control failures, instrumentation malfunctions, or contaminations in consultation with lead worker or supervisor, and determines and implements corrective actions;
- Actively participates in emergency response activities or environmental responses;
- Studies new developments so that procedures and instrument utilization in the unit are up to date in area(s) of analysis using scientific and technical literature, seminars, etc. and as directed by unit leader;
- May perform peer review of data and laboratory quality control documents;
- Maintains traceability and chain of custody in accordance with lab procedures;
- Confirms positive pathogen or biomarker results;
- Compiles data packet results, prepares data packets based on established procedure found in the methodology, enters results into the laboratory systems, and may submit complete and accurate data packets to the unit supervisor or designee for review.

IV. KNOWLEDGE, SKILLS, AND ABILITIES

- Considerable knowledge of the principles and practices of microbiology, chemical, pesticide, physical, or environmental analysis, general laboratory practices and methods, and laboratory safety;
- Knowledge of standard laboratory safety procedures, chemical terminology, and safety data sheets sufficient to safely engage in laboratory operations and minimize the potential for injury;
- Knowledge of quantitative research methodologies;
- Ability to operate, troubleshoot, and maintain advanced, scientific instruments;
- Ability to safely conduct laboratory operations so that the potential for accident and injury is minimized;
- Ability to use software programs to aid in the acquisition and interpretation of large, raw analytical data sets and concisely generate final data reports and results; and
- Ability to think critically to solve complicated analytical problems.

LICENSURE/CERTIFICATION/STATUTORY REFERENCES

No required licensure

SPECIAL WORK CONDITIONS

REFERENCES

Former title(s): N/A

REVISION HISTORY

Established: 12/2023

Revised MM/YYYY