State of Michigan
Civil Service Commission

Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

Position Code
1. LABSCIE

POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.

2. Employee's Name (Last, First, M.I.)	**8. Department/Agency** MDHHS-COM HEALTH CENTRAL OFF
3. Employee Identification Number	**9. Bureau (Institution, Board, or Commission)** Laboratories
4. Civil Service Position Code Description Laboratory Scientist-E	**10. Division** Chemistry & Toxicology
5. Working Title (What the agency calls the position) Laboratory Scientist 9-11	**11. Section** Environmental Chemistry
6. Name and Position Code Description of Direct Supervisor FREED, KELLEY; LABORATORY SCIENTIST MANAGER-3	**12. Unit** Environmental Inorganic Unit
7. Name and Position Code Description of Second Level Supervisor FISHER, KERI; STATE ADMINISTRATIVE MANAGER-1	**13. Work Location (City and Address)/Hours of Work** 3350 N. Martin L. King Jr. Blvd., Lansing / 8:00 AM – 4:30 PM; Monday – Friday

14. General Summary of Function/Purpose of Position

The Laboratory Scientist in this position provides analytical support to the Environmental Chemistry Section and carries out a range of professional laboratory assignments involving the analysis of food, environmental and biological samples for a wide range of heavy metals, persistent and non-persistent organic pollutants and other environmental contaminants. The analysis of environmental and biological samples includes sample preparation, quantitative analysis involving ICP-MS; ICP-AES; and ICP-DRC-MS; and performing routine maintenance on laboratory equipment. This position reviews approved data through the current LIMS (Laboratory Information Management System). The Laboratory Scientist participates in methods evaluation, methods development, and validation of methods and documentation of laboratory methods in terms of written laboratory procedures, practices and policies. Lastly, this position assures that accurate data is obtained and reported in a timely manner to the appropriate follow-up programs throughout the state and country in support of public health decisions.

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary: **Percentage: 65**

Perform the analysis of environmental and biological samples for a wide range of heavy metals and other environmental and industrial contaminants in support of the Childhood Lead Poisoning Prevention Program, Lead Hazard Remediation Program, Food Emergency Response Network, Public Health Emergency Preparedness, and other cooperative agreements. This duty is performed according to established procedures, policies and practices of the Environmental Chemistry Section.

Individual tasks related to the duty:

- Sorts, organizes, and logs batches of samples into the Starlims, the laboratory information system, according to the appropriate procedure.
- Perform sample preparation for environmental (dust wipes, soil, paint, water), tissue and other types of samples received into the laboratory.
- Prepare stock standards, spikes, blanks, controls, solutions, and other reagents for analysis by equipment according to the appropriate procedure.
- Assembles supplies and prepares equipment for the assays following the authorized methods. The equipment used is an inductively coupled plasma atomic emission spectrometry (ICP-AES and ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS and ICP-MSMS), automated hotblock, microwave, thermal decomposition/atomic absorption spectrophotometry (TD/AA) and liquid chromatography/Gas Chromatography inductively coupled plasma mass spectrometry (LC/GC-ICP-MS).
- Review data from ICP-AES, ICP-OES, ICP-MS, ICP-MSMS, LC/GC-ICP-MS, and ICP-DRC-MS instruments, samples request forms and reports for accuracy.
- Review and evaluate the validity of laboratory test results using Quality Control (QC) values specific to the analytical methodology.
- Review instrument calibration, quality control and samples analysis data in terms of acceptable performance standards.
- Post accurate results to the specific databases for each of the various samples types.
- Perform analysis on proficiency testing materials.
- Maintain competency at the appropriate frequency and according to the accreditation guidelines.
- Maintain instrument maintenance logs, balance logs, sample receiving logs, reagent logs, and other laboratory logs/sheets according to established policies and procedures to meet regulatory requirements.
- Assure proper disposal of biological and chemical waste materials generated during the performance of assigned laboratory work.
- Follow all laboratory procedures and practices pertaining to universal precautions, laboratory safety, laboratory infection control, laboratory chemical hygiene and the handling of hazardous materials.
- Operate, maintain and troubleshoot instruments and associated computers.

Duty 2

General Summary: **Percentage: 15**

The laboratory scientist in this position will assist in the development of written laboratory procedures for new laboratory methods and will work closely with other laboratory scientists in the section and division to organize, plan and perform methods evaluation and modification of current laboratory methods as needed. Perform evaluations on current and new laboratory instruments and equipment. This duty is performed according to established procedures, practices and policies of the section.

Individual tasks related to the duty:

- Assist in the design of laboratory studies to evaluate and modify current laboratory methods.
- Work with other laboratory scientists in the section and division to review, update and write laboratory procedures as necessary.
- Assist with the implementation and evaluation of new laboratory instrumentation and equipment including the StarLims database system.
- Participates in laboratory studies to develop new laboratory methods utilizing analytical instrument techniques such as spectroscopy, and spectrophotometry for a wide range of heavy metals and other environmental contaminants in support of public health decisions.
- Participates in analyzing laboratory data from new methods development studies utilizing analytical instrument techniques such as spectroscopy, and spectrophotometry for a wide range of heavy metals in support of public health decisions.
- Assure proper disposal of biological and chemical waste materials generated during the performance of assigned laboratory work.
- Follow all laboratory procedures and practices pertaining to universal precautions, laboratory safety, laboratory infection control, laboratory chemical hygiene and the handling of hazardous materials.

Duty 3

General Summary: **Percentage:** **15**

Perform duties required by the workload of the Unit and related to the policies, standards and professionalism of the Bureau.

Individual tasks related to the duty:

- Order necessary supplies.
- Aid in determining priority status of sample/specimen requests.
- Maintains records and prepares reports and correspondence related to the work of the section and division.
- Monitor the stability of the various analytical instruments and methods using the QC data.
- Attend meeting, seminars, workshops and conferences as related to the section and division.
- Review scientific literature, technical bulletins and government documents for technical information relevant to the section and division.
- Attend annual safety training.
- Perform skill confirmation tasks in iPassport, the Bureau's document control software, in a timely fashion.

Duty 4

General Summary: **Percentage:** **5**

This position will function as a member of the Michigan Bioterrorism and Chemical Terrorism Public Health response teams as needed.

Individual tasks related to the duty:

- Conduct activities to prepare health care professionals and other partners for possible bioterrorism or chemical terrorism incident of event.
- Respond, as necessary, to a possible bioterrorism or chemical terrorism incident or event, to provide state assistance to health care professionals in investigation and control efforts.

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

- Determination of the validity of laboratory test results.
- Determination to release and report results or to repeat analysis.
- Apply professional judgment and experience to solve problems that arise during the performance of work assignments, while keeping management apprised of the situation.
- It is essential that accurate and timely lab results are reported because certain levels of contamination trigger remediation procedures in housing that is occupied by lead burdened children.
- Health advisories for children pregnant or nursing women are also dependent on accurate reporting of mercury levels in Michigan fish.

17. Describe the types of decisions that require the supervisor's review.

- When guidelines or instructions are not available.
- Policy matters that involve the Bureau or the Department such as those covered by the Privacy Acts or similar entities.
- All reports documenting methods development, evaluation and validation.
- All reports documenting laboratory analysis of environmental, biological samples, food, reference material and proficiency samples, including quality control samples. Work assignments and prioritizing of laboratory activities.
- All safety policies.

18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.

Any person working with specimens of human origin from unknown patients is at increased risk of acquiring communicable diseases by bacterial, viral or other infections and is required to use careful aseptic techniques and proper precautions while working. Laboratory work involves daily contact with biological samples and hazardous chemicals. Accurate and precise laboratory and safety procedures, including universal precautions, must be followed at all times.

Physical Activities: Extended periods of standing, sitting, walking, carrying heavy objects, and computer usage.

Conditions/Hazards: Constantly exposed to hazardous chemicals, fumes, noise, and contaminated samples.

19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.

Additional Subordinates

20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):

N	Complete and sign service ratings.	N	Assign work.
N	Provide formal written counseling.	N	Approve work.
N	Approve leave requests.	N	Review work.
N	Approve time and attendance.	N	Provide guidance on work methods.
N	Orally reprimand.	N	Train employees in the work.

22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?

Yes.

23. What are the essential functions of this position?

Duties 1-4

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

New establishment.

25. What is the function of the work area and how does this position fit into that function?

This unit performs a wide range of laboratory analysis of environmental and biological samples for evidence of trace amounts of heavy metals and other environmental contaminants. These samples come from counties and clinics throughout the state of Michigan in support of Medicaid and HUD lead programs, from other state agencies and departments, researchers conducting biomonitoring studies, the CDC, and cooperative agreements with the USDA. This position assures that accurate and precise data and results are obtained in a timely manner so that appropriate follow-up personnel can track and treat individuals.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of a bachelor's degree in chemistry, biochemistry, biology, microbiology, forensic science, or a related pure or applied science.

EXPERIENCE:

Laboratory Scientist 9
No specific type or amount is required.

Laboratory Scientist 10
One year of professional experience carrying out a variety of tests, analyses, or production and research activities involving chemical, biochemical and biological samples, specimens, and products equivalent to a Laboratory Scientist 9.

Laboratory Scientist P11
Two years of professional experience carrying out a variety of tests, analyses, or production and research activities involving chemical, biochemical and biological samples, specimens, and products equivalent to a Laboratory Scientist, including one year equivalent to a Laboratory Scientist 10.

KNOWLEDGE, SKILLS, AND ABILITIES:

As listed on the Civil Service job specification. In addition:

- Meticulous work habits and good attendance.
- Ability to communicate effectively and maintain favorable relationships with both peers and the public.
- Knowledge of departmental rules, regulations and policies related to the lab environment.
- Knowledge of computer application programs for laboratory activities and data management.
- Skilled in the use and care of common laboratory equipment, personal protective equipment and analytical instrumentation.
- Ability to carry out laboratory procedures, tests, and analyses required in the work and to interpret results obtained.
- Ability to maintain records and conduct correspondence related to work.
- Ability to maintain detailed records and prepare technical reports related to work.
- Ability to prepare written laboratory procedures.
- Knowledge of the principles and practices of general, qualitative, quantitative, and inorganic chemistry.
- Knowledge of appropriate health, safety and environmental regulations to provide for safe laboratory practices.
- Knowledge of statistical and quality control techniques used in the treatment of scientific data.
- Ability to function as an effective team member.

The MDHHS mission is to provide opportunities, services, and programs that promote a healthy, safe, and stable environment for residents to be self-sufficient. We are committed to ensuring a diverse workforce and a work environment whereby all employees are treated with dignity, respect and fairness.

CERTIFICATES, LICENSES, REGISTRATIONS:

Must meet the CLIA ’88 standard and CAP regulatory requirements.
Must meet the ISO/IEC 17025 standard and AIHA-LAP, LLC regulatory requirements.

NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor **Date**

TO BE FILLED OUT BY APPOINTING AUTHORITY

Indicate any exceptions or additions to the statements of employee or supervisors.

None.

I certify that the entries on these pages are accurate and complete.

Appointing Authority **Date**

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Employee **Date**